

# GATEWAYS TO ART AND INDUSTRY





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**GATEWAYS TO ART  
AND INDUSTRY**



# GATEWAYS TO ART ∴ AND INDUSTRY ∴

By OLIVE RUSSELL and ALICE O'GRADY  
*Kindergarten Department ∴ Chicago Normal College*



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## FOREWORD

During the last decade, the kindergarten has generally become the accepted first grade of public schools, especially in large cities.

Its recognition demands the development of instinctive impulse—emphasis on social co-operation and kindness, and work based on active, expressional and appreciative, rather than technical, analytic, and receptive values in education. Where the work is well done, these characteristics have given it a constantly increasing respect.

Where the work is neglected or in the hands of inefficient or unintelligent people, it suffers from criticism a little more than does dishonest or unsatisfactory work in higher grades. The reason for this is, that it is a newer phase of education, that its values must be apprehended by an intrinsic standard, and that in some cases the young teachers lack the power to adjust themselves intelligently and definitely to the larger work of the school curriculum.

This book aims to help both supervisors and

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## FOREWORD

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teachers to a more accurate sense of the perspective necessary in the work of the kindergarten, and to the possibilities, both present and potential, of the work done. Kindergarten work should not be pushed up into the work of the grades, and the work of the grades should not be forced down into the performances of little children. Each has its true relations to the other, however, and all that is done should have its reach onward on the one side, and its sense of previous support on the other.

Whenever we find weakness and isolation, it should be an incentive to a discovery of true connections, rather than an opportunity for destructive criticism. Under any circumstances, it is at least a valuable attitude for the first adventure into education that the emphasis should be on, "What can I do?" instead of "What can I know?" In this development of constructive activities the child enters at once into an experience where the value of the accomplishment has its immediate reaction in the result obtained.

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# GATEWAYS TO ART AND INDUSTRY ∴ ∴ ∴

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The things a child can make  
May crude and worthless be,  
It is his impulse to create  
Should gladden thee,  
Throwing a sacred light  
On each weak putting forth  
Of the child's soul and giving it  
Prophetic worth.

*F. Froebel.*

No better beginning for this little book can be found than in these words of Froebel, who saw so clearly the value of these weak attempts of little children; a value not so clearly estimated by the average adult, who lacks the faith of genius or experience. It is in the hope that these early efforts may be more carefully nurtured and more clearly recognized in their relations to future activities that these suggestions for the first steps in children's work are offered.

Many statements which parallel Froebel's may be found in recent educational litera-

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## INTRODUCTORY

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ture; perhaps the best is in the "Child and the Curriculum," by John Dewey:

We do not know the meaning either of the child's tendencies or of his performances, excepting as we take them as germinating seed or opening bud of some fruit to be born. The whole world of visual nature is all too small an answer to the problem of the meaning of the child's instinct for life and form. The art of Raphael or Corot is none too much to enable us to value the impulses stirring in the child when he draws or daubs.

*John Dewey.*

The first and most important element in the situation is the child's formative impulse—"The drawing and daubing, the instinct for life and form." This should always be the foundation stone of what we do. Any one who has watched a little child in the nursery, constantly imitating the activities of his elders, acting, building, marking, experimenting, always busy like a little bird, collecting, changing, combining, tearing, will know how strong this impulse is, and how very seldom it is satisfied.

He is endeavoring to bring to pass something in which his idea is too big for his expression, and in which he is baffled again and

again by his weakness in technique, and in management of material. To help him to produce should first be the aim, and secondly, to see that his power is always leading out into the requirements of orderly and beautiful relations. Leading out,—we do not expect to go far, but even as the first steps the little creature takes in learning to walk are and must be in right relation to the laws of health, balance, and direction of energy, so his first activities in the ordering of material can be based on laws which ought to require his obedience in all his performances to follow. Proportion, rhythm, interesting form, joyous color, are things which will awaken unconscious feelings of delight and satisfaction that can be legitimately encouraged. But these things are in the teacher's hands and must contribute in her to that sense of perspective and growth which alone will give dignity and permanence to her work. It is this insight into possibilities which the teacher of any grade must always keep before her to give her courage and true judgment; especially is this true of the teacher of little children,—their feeling for things is so strong, their interest in action

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## INTRODUCTORY

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so marked and their power of definite expression so weak. Not only is the power of expression weak, but the difficulties which their lack of experience and the environment present to them are often insurmountable. Unless they have unusual persistence, after a few efforts they give up the unequal struggle or have to content themselves with less than they designed. A small boy in one of our kindergartens brought his mother a bird's nest made by him, in his play at home, of grass and thread. The thread he had been allowed to have if he could reach the tangled part of a spool which had rolled away under a bed in the sewing room, and he quaintly explained that he could have made a better one if he could have got some mud from behind the hen house. But the nurse in charge said he would soil his clothes,—unworthy consideration when the small artist is struggling for satisfaction,—and yet how often we philistines fail to understand. We place so many obstacles in the path of the little apprentice of life.

It was his sympathy with, and his deep understanding of, childhood which made Friedrich Froebel undertake the task of pro-

viding materials for childish expression and a method which should give some support and direction without interfering with freedom and individuality.

In fairy tales, those unconscious records of the awakening impulse of the race, the hero or heroine is never left to perform the task alone. The friendly powers of nature or magic, the kindly giant or elf, adds wisdom or direction which is made fruitful by the force and imagination of the mortal man or maid.

So our little folk come to us with questions, often with dumb desires for aid. If we can give answer to these with just enough response, neither dominating nor discouraging, but only giving nurture, to use Froebel's wise word, how much we may increase the skill and power of the children and perhaps steady a fleeting impulse into a permanent and valuable interest.

It is more than seventy-five years since Froebel gave to education his helpful and suggestive series of occupations and they have contributed much to the life and power of childhood. During these years, however, great advance has been made in artistic and indus-

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## INTRODUCTORY

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trial work; much of this new impulse as it found its way into the schools was due to the emphasis the kindergarten placed on learning with the hands. Indeed, as we know, Cygnæus, the originator of Sloyd, was indebted to the study of Froebel's work for the conception of his idea, and Sloyd was the foundation of our present manual training movement which is now broadening to include a really vital relation to life. But it is time the new insights gained should in turn reorganize the work for little children, testing it by standards of art and simple fundamental expression; faithfully preserving those principles that are vital, and reconstructing what is found wanting.

This is what the authors of this little book have endeavored to do. They offer these suggestions as the result of study and experiment, and have tested all that is here set down in actual work with children. They have not desired to give anything startlingly new or in radical departure from the past, but rather to bring the past into a more real and useful harmony with the present.

In order to make this clear a little space will



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be given here to a few general points which will be universally applicable in all the work taken up.

The principles of continuity and variety are fundamental and the material used is suggestive and simple.

All contributions should be the result of interaction of teacher and children as a group, although each child should work out his contribution by himself through discovery and experiment. The teacher expands, encourages, and when necessary through her experience adds a richness to the situation which would have been lacking if the children had worked alone. She must also by her selection, by her emphasis and by her own work make a standard for comparison and stimulation.

In all the work the relation of feeling to beauty must be kept in mind. Color, arrangement, proportion, rhythm, and repetition are the elements which make this appeal to joy and unconscious pleasure; unconscious, in that the child does not realize the source of it. The teacher, however, must be conscious in her appreciation and selection according to these principles. And nowhere can she make

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this more effective than in her selection of materials. A simple thing can be made interesting and beautiful by the texture, color, suitability of the material used; by the proportion, arrangement, and true relation of even the simplest decoration. Too much emphasis cannot be laid on the value of this point.

Steps of relation or growth must always be felt in the work; but instead of the long and tedious schools of work planned by Froebel, short and interesting series are presented, each leading to a climax in some result worth while.

The types of play or play-forms in the work are experimental, manipulatory, constructive, or productive, and many have a special emphasis on sense-exercise or sense-play. The joy of using pretty things, arranging them and getting new sensations out of them combined with a slowly growing feeling of the possibilities of material and the defining of purposes for its use.

Through repetition of activities in new materials, new sizes, new colors and new combinations practice is given leading to a little more skill.

And through these types of variety encour-

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## INTRODUCTORY

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agement is given to originality, or at least to individual expression of possibility.

In all this work, also—though it is for the kindergarten, and in harmony with all the work done there—the relation to the primary school has been preserved and it forms a natural and logical beginning for the work to follow.

## PART I PRODUCTIVE ACTIVITIES

The work as outlined begins with the series for the first year children and continues through to the end of the second year. The order in which any work is given will indicate how the steps should follow one another. In every instance the simplest types of work will come first, gradually becoming more difficult.

The handwork taken up in this book will include the following:

Sorting,	Drawing,
Stringing,	Color work, including:
Knotting,	Painting,
Sewing,	Crayoning,
Weaving,	Blue Prints,
Paper and construc-	Transparencies.
tion work,	

The plan of the work is sufficiently obvious to proceed without further discussion.

## SECTION I SORTING

**Introductory.** Sorting, grouping or classifying of objects according to interesting or distinctive qualities is one of the most natural of a small child's activities. It is a part of his interest in getting the names of things, and we all know how often the question is on a child's lips—what is this? What do you call this? His world must be distinguished or pigeon-holed in some way and he follows very closely the history of the race when he unconsciously desires to take that first step in gaining power over a thing by getting its name, thus ordering it into its place.

In the "Education of Man," there is a most interesting section devoted to the discussion of sorting, but like many of Froebel's suggestions for the use of informal or unconventional material it has been too little regarded. It is used as merely incidental to something else, so that its larger purposes and educational value have not been studied. "Education of Man," Section 38.

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## PRODUCTIVE ACTIVITIES

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**Purposes.** The following are the purposes of Sorting:

Distinguishing kinds through

- |            |                    |
|------------|--------------------|
| 1. Naming, | 5. Texture,        |
| 2. Color,  | 6. Weight,         |
| 3. Size,   | 7. Number or idea, |
| 4. Form,   |                    |

or to make interesting groups and arrangements.

**Method.** With each sorting exercise much use of language in names and action-words and many sense-plays should be developed.

The sorting with the younger children should be often a separate exercise, and with the older children used in connection with other exercises. The walks taken by the older children will give them opportunity to collect things for the sorting boxes. Small stones, seeds, leaves, almost any object that possesses some quality which gives it interest in children's eyes is suitable. While not everything can be accepted, that is, we cannot keep a ragbag or scrap heap, the range of choice, especially at first, should be fairly wide. In

time the children's eyes open to the idea of collecting and their judgment of what is suitable can soon be cultivated.

First sort only for name. Then select some distinguishing quality. In general, follow the order given, though sometimes two or three of these interests may well be used together.

Always end the exercises by encouraging expressions in use and arrangement, being satisfied at first with laying in rows. Use contrast—for instance, next to a row of large things lay a row of small things, and select from spontaneous suggestions offered by the children a simple advance.

**Materials.** Materials for sorting are of two kinds which may be roughly designated as formal and free. The more formal material consists of

- Beads, wooden,
- Colored papers,
- Colored pegs—large sticks of different lengths,
- Balls, blocks, cylinders, boxes, baskets or other objects of these shapes,
- Spools,
- Button molds,

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## PRODUCTIVE ACTIVITIES

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Pictures,

Colored papers, silks, any attractive colored materials,

Small bells or other objects which suggest interesting activities or qualities.

In free material:

Shells,

Nuts,

Stones,

Pods,

Seeds,

Leaves.

The play element in these exercises consists in the experiment involved, in the many sensations enjoyed by the children and in the variety and combinations of the materials used.

Sometimes end the lesson with a definite sense-play, blindfolding the children, thus isolating sensations.

**Collection of Material.** In collecting material let the children contribute. It is well to

keep the sorting material in boxes: baking powder cans or a small cake or despatch box. A small screen, about three feet high, made of coop wire in a wooden frame, makes it possible to take care of boughs, branches, leaves or berries, nests, burrs, seed pods, and things which it is not convenient to



keep on the walls of the room. The children in this way learn to connect the larger aspect of the object with the same thing used in sorting or afterwards in stringing or in other attractive ways.

Milkweed pods, barberry and bayberry branches, burdocks and thistles, colored leaves, branches of nuts, branches of seeds such as ash, or catalpa pods and any winged seeds, alder berries and rose haws will be very interesting and beautiful used in this way.

At any of the parks, gardeners will give to any teachers who go there in the Fall, many interesting pods for the asking. A day or two in the country or the ravines and sand dunes in the suburbs, in the Spring or Fall will provide much. Friends can be enlisted in service of collecting for the schools. Small boys for a few cents will bring in baskets of nuts or acorns and through getting some or all of these avenues open, a sufficient supply may be obtained.

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## PRODUCTIVE ACTIVITIES

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### SECTION II STRINGING

**Introductory.** Stringing has in many instances been allowed to fall into a mechanical and uninteresting occupation through the constant repetition without variety and through the use of commonplace and unbeautiful combinations and materials. It has, however, great possibilities and is a valuable occupation for children, as the activity is so easily mastered, and the artistic opportunities and interesting and child-like uses so many. But the teacher must remember that growth ceases when active attention is no longer required, and that only by change or variety, or by the opportunity being given to the pupil to suggest and arrange new combinations, can this work be made of real value.

**Purposes.** The purposes of the occupation are the making of interesting things and the application of artistic possibility to actual and childlike situations.

**Materials.**

Wooden beads,	Rose hips,
Straws,	Sunflower seeds—large
Clay beads,	and small,
Clay disks,	Burdock burrs,
Tissue paper,	Checkerberries,
Beans,	Holly berries,
Corn—blue, yellow	Bittersweet,
and red,	Acorns,
Watermelon seeds,	Horse chestnuts,
Muskmelon seeds,	Tree seeds,
Cranberries,	Leaves,
Raisins,	Daisies,
Popcorn,	Clovers,
Allspice,	Barberries,
Small peppers,	Lilac blossoms.

This leads over into combinations with tying and knotting, and the braiding of clover chains and combining with flower pods in nature play. Short series for stringing are here given in order of difficulty chiefly as an illustration of the development of a few steps. It is to be understood that these series are not arbitrary, only illustrative; many others could be developed on the same principle.

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## PRODUCTIVE ACTIVITIES

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### NO. I BEADS FOR COLOR—COMBINE WITH SORTING:

#### Illustrative Series.

- A. All colors,
- B. One color,
- C. One color and white,
- D. Another color,
- E. This with the first color or white,
- F. Another color,
- G. Choice of any combination from these.

#### SERIES BASED ON FORM

- A. Any form,
- B. All one form,
- C. All another form,
- D. Combine in any way desired.

#### SERIES WITH NUMBER AS A BASIS

- A. One and one. Any two selected forms and colors.
- B. Two and two,
- C. Three and three,
- D. Combine one and two,
- E. Combine one and three,

F. Any interesting combination suggested by the children.

Use thin laces for these and in general use the strings decoratively in the room.

In stringing with straws use waxed lemonade straws, five hundred in a box, at thirty-five cents a box. Cut into the desired lengths. These are better than the ready cut straws. Use papers of soft colors, the same on both sides at first, if possible. After cutting is begun, the older children may sometimes cut for stringing later or cut papers for the smaller children to string (see cutting). Also they may paint their own papers for use in stringing (see painting). Use No. 23 crewel needles. Long, thin darning needles may be used for the older children. Both kinds of needles have long, large eyes.

### SERIES OF STRINGING WITH STRAWS

- A. Circular papers, straws of equal length,
- B. Square papers, straws of equal length,
- C. Circular papers, straws of unequal length alternated,
- D. Same with square papers,

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## PRODUCTIVE ACTIVITIES

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E. Circular or square papers with groups of shorter straws spaced by longer ones,

F. Develop many interesting ways of grouping equal and unequal lengths of straws.

### SECOND SERIES OF THE SAME

Straws with papers cut into flower-forms from sheets made by the children in painting (see painting section). Do not go too fast. Use equal straws first. Develop the spacing and grouping, with interesting flower and geometric forms.

This second series of straws and papers would be for the older children.

### SERIES WITH TISSUE PAPER

Circles of tissue paper, two and four inches in diameter. Put over the index finger, crush together, string.

Do the same with square or oval paper. String in wreaths or bunches.

If used in the Spring choose delicate colors with green. In the Fall, orange, purple, red and rich yellow with brown. Of course, whenever possible at the time the stringing is being given, groups of flowers providing these

combinations should have previously been placed in the room. Asters or goldenrod, nuts or berries in the Fall. Daffodils, tulips or hyacinths in the Spring. Perhaps there is no time when the color sense of the children may be so naturally developed as in these connections with the soft color harmonies of nature.

Sometimes in this stringing combine the papers with straws. Short lengths give the best result, but experiment. Combine with beads. Cut the papers in rose forms. Use two or three shades. String on dyed raffia with a coarse needle.

There are so many interesting developments that suggest themselves that it would be impossible to indicate them all.

#### SERIES OF PAPER LINK CHAINS

A. Make paper rings of different sizes for hoops, bracelets, finger rings, etc.,

B. Make separate rings and string on cord,

C. Make paper links equal in width and length, linking them together,

D. As facility is gained, refine the widths of the links used,

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## PRODUCTIVE ACTIVITIES

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- E. Make the links longer,
- F. Alternate short and long links,
- G. Use graduated links.

Last cut on line double links, putting together with the fingers. Another simple paper decoration in fringe fashion is made by folding tissue paper strips about three inches wide into several folds and making cuts alternately from opposite sides to the center. Unfold and shake out.

### SERIES OF CLAY BEADS AND DISKS

- A. Make clay beads. String on a stick,
- B. Clay beads on a string,
- C. Clay beads. Make a hole through, dry, paint, string,
- D. Clay disks. String,
- E. Clay disks. Punch a hole through, dry, paint, string,
- F. Beads and disks,
- G. Cylindrical forms treated the same way. Combine with disks.

Small pieces that are left over may be pinched, rolled, or twisted into quaint forms that may be attractively strung.



## SEED STRINGING

Beans of different sizes, forms and colors offer the most satisfactory material for the first seed stringing. Soak the beans before stringing and allow the children to pierce them in any direction they wish as this will give a much greater variety than if the beans are presented pierced by the teacher.

Only experiment will decide how long the different types should be soaked, but care must be taken that they are never used while there is an odour, and they must always be properly dried, though not dry, before being used by the children.

The attractive value lies not only in the use, but in the whole circumstance of their presentation.

In this stringing, the interest is along the line of arrangement and color and form, rather than simply activity. In other words, the emphasis on the esthetic factor is stronger because of the enjoyment and experience the children have had in the pure stringing of more formal material. It is more legitimate here not to mix kinds of material. That is, the spacing should be by means of knotting,

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## PRODUCTIVE ACTIVITIES

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rather than by the use of straws, beads, or other artificial material.

Peas do not make good material for complete strings. They should be used more as a period, simply to end a series which will then be repeated. This will also add an interesting touch of color and the same is true of any small seeds. From this time combinations should be made and the teacher should see that these are interesting and beautiful.

Some of the following are good:

**Material.** Rose hips and sunflower seeds,  
Burdock burrs and watermelon or  
checkerberry,

Sunflower and bittersweet or small peppers,  
Job's tears and checkerberries. (Job's tears  
may be obtained at any seed store for a small  
price).

Varieties of nuts are better alone. Because  
of the difference in shape, size and color, one  
kind will give much effect of variety.

Also the use of knots must not be forgotten,  
as, for instance, an acorn, a knot, a cup, a knot  
and so forth.

One interesting experience for the children  
in making these strings is the contrast in

weight, some being so heavy, others so light, and some becoming so light after drying. The drying of the seeds also changes their appearances, giving them sometimes a carved or mosaic quality which is a new beauty.

The material on which the seeds are strung is like the background of a picture. It may add to or detract from the interest.

The following material may be used:

Twist,	D. M. C. cords and cot-
Raffia,	tons,
Druggist's string,	Soft colored threads.
Macramé cord,	

Care should be taken that the weights and color of these materials are suited to the type of nature material to be strung.

In these materials there is much for the teacher to develop further, as, for instance, in the double stringing, so well worked out in "Organized Stringing" (Pub. by National Kindergarten College) which is often very beautiful, and makes good work for the primary children.

A word may be said here in comment on the stringing of seeds. In the early days of

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kindergarten organization when there existed

**Comment.** a certain sentimental, over-subjective attitude towards nature study, animism was foolishly emphasized. All sorts of fanciful suggestion was given to the children, and a rather morbid and unreal emphasis placed on the life element and personal feeling of natural phenomena; any artistic or constructive use of seeds, leaves or flowers was considered at least unmoral, if not immoral. With a more scientific and sympathetic understanding of child-life, we have come to realize that this premature awakening of responsibility and subjective appreciations of other life, is the unmoral thing. While the childish animism is very real, very strong, and important, it is based on a sense of joyous companionship and affection which is thoroughly objective. It does not include the perplexities of imputing inner moods, pains or distresses (of which the child himself has little realization) to this friendly world. Therefore the elementary sympathies are isolated when any object in nature is used in beautiful, interesting or constructive ways. The only immoral

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use of it is in wanton destruction or purposeless activity. A watermelon party in the Fall, after which the seeds are carefully collected, washed and dried for future use in stringing or pasting, is a much more wholesome and educational experience in child-life than any length of sentimental talk or story making of the reproductive cycle of seed-life.

### SECTION III KNOTTING

**Purposes.** Knotting has been referred to several times in this work and it is an occupation full of possibility. It arises naturally from the need of tying hangers in small picture frames, or in tying sheets for a book. For the child it is not a matter of decoration but something required. He gets the experience and it is then applied to other situations. The teacher, conscious of the possibilities in the new activity, makes them decorative and regulates them, so that they offer progression to more beautiful uses and more difficult and interesting tyings.

The materials used are:

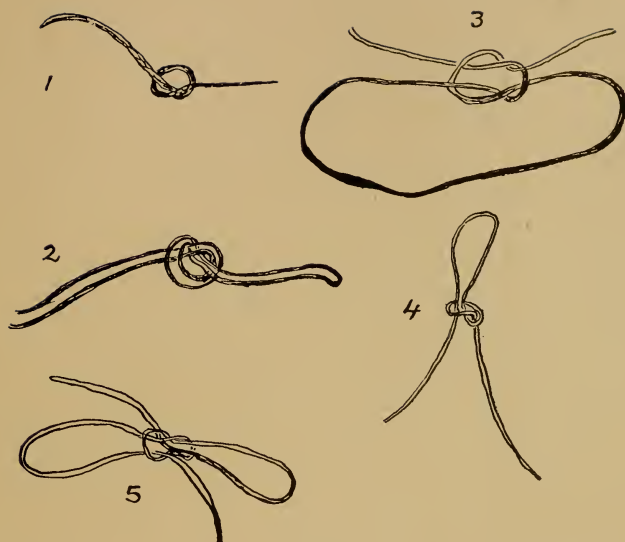
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**Materials.** Jute,  
Cable cord of different weights  
and plies,  
Couching cotton,  
Cotton clothes line,  
Twine and druggists' string,  
Yarns,  
Silk cord,  
Cotton cord,  
Seine cord,  
Silkline,  
Colored shoe-strings.

**Kinds of Knots.** The knots used are of these kinds only. The simple knot, overhand and for older children, the flat knot, and single and double bow knot. Combinations of these can be used; for instance, one way that the little children can tie a large knot is by making a single knot and tying on that other single knots. Another simple knot is made by tying below the knot instead of on top of it. This makes a long knot rather than a round one. (These knots are illustrated in the accompanying diagram and plates.) A good way to begin this long



# KNOTS.

- |                             |                     |
|-----------------------------|---------------------|
| 1. Single knot overhand.    | 4. Single bow knot. |
| 2. Same with double thread. | 5. Double bow knot. |
| 3. Flat knot.               |                     |

See plate for long knots, etc.





knot is to tie a large glass or wooden bead in the first knot. These beads should be occasionally introduced with the knotting, using only one or two of these, however, and for spacing only. The thread may also be put twice through the knot when tying, thus making the larger knot.

**Application.** It will be readily seen how the knotting will combine with the stringing as a means of spacing. A simple method of making the double knot at first is by leaving the loop in two overhand knots and then tying these two together. The knotting should be applied in the following ways as well as in the stringing and the making of knotted necklaces:

Cords for fans, prisms, trumpets, kites and caps,

Hangers for frames,

Whistle cords,

Scissors cords,

Cords for the triangle,

Cords for fringe or bags,

and any other simple practical use.

In the heavier cord, drum chains, reins, and jump ropes form the best uses. For these

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cotton clothes line of medium weight, obtainable at ten cents the piece, should be used. One piece will make half a dozen children's skipping ropes. For handles use wooden spools of the largest size painted or dyed. Such crude material allows very crude results that are satisfactory; for instance, the children can decorate them in various ways with bands or splashes of color and they will look well. An interesting way to make many of these things is through group work. Two children can work together in the cross-tying of knots. Two heavy cords are laid crosswise on each other at right angles. The opposite ends of the under cord are tied over the upper cord. Continue the process. These materials should sometimes be dyed before using. Then pretty, bright combinations of color can be used and a very attractive rope is the result.

In this work of knotting as in all other work there is much yet to be contributed, and each teacher should be constantly alive to the new opportunities that present themselves.

## SECTION IV SEWING

**Introductory.** No doubt many critics will cast suspicious eyes on this section of this outline with the recognition that it needs much courage and presumably much presumption to suggest sewing for young children after the many objections to its use.

The history of kindergarten sewing begins with the complicated and unsightly work of forty years ago. This was done with violent colors on white cards pricked with small holes and the series dragged its slow length through patterns of minute variety. And yet, in spite of all its faults, children enjoyed it and often produced patterns of their own that were varied and interesting. However, under the merited criticism of its faults, it gradually disappeared and was either thrown out altogether, or so much modified that one could not recognize the work of early days. Where it was done the cards were larger with large holes and the color softer and more pleasant. Many other materials were used. The work became much simpler and more childlike, and the difficult and distressing sewing of crude

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## PRODUCTIVE ACTIVITIES

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and unsuitable pictures was given up altogether. Gradually in the schools where even the modified sewing was not used, another type was taken up; the sewing of cloth with needles and thread, and in this many experiments were tried. Iron holders, mittens, dolls-clothes, mats and other things were made, but these too, in time, were discarded.

The work in general was too small and fussy to be of use with young children and the material unsatisfactory and without perspective. But still the interest in sewing remained and a certain value is recognized, that can be supplied in no other way.

**Purposes.** It offers an educational and social opportunity combined that is worth while. Being a form of work which is used almost entirely for the older children, the interest in the activity is less immediate, and it gives opportunity to show the growth the child has made in earlier experiences. This is evidenced through his power to handle new work, and in his appreciation of choices in form, color, and material. There should be no sewing until during the second year and that should begin with free winding.

Many people feel that sewing is a long process, but it should be taken only as a short stage; it should be introductory rather than actual, and thus make a beginning for the work in the primary school.

The materials used for this sewing are:

**Materials.**

Strawboard,	Felt,
Cardboard,	Ticking,
Constructive paper,	Kindergarten cloth,
Galatea,	Oilcloth.

**Threads used:**

Corset laces,	Warp cord,
Shoe lacings,	Jute,
Heavy wool,	Raffia,
Germantown,	Cable cord.

Various weights of D.

M. C. cotton,

All these in attractive colors. And a word of suggestion might be given here. Every kindergarten teacher should familiarize herself with simple processes in dyeing. Nowadays with the easy dyes and the Diamond dyes,

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she can experiment with great success and her experience and discoveries will be of the greatest value in her work. Many inexpensive materials can be made beautiful through dyeing, and also it will put the materials in her hands in endless variety.

The punches to be used in preparing the work are the following: Different sized stil-tos. The best size is one quarter inch, obtainable at any hardware store for from ten to twenty-five cents each. A good set punch such as the adjustable gauge punch which can be set to any size. Carpenters' awls and a score punch may also be used.

A very simple but practical punch can be made by running a ten-penny nail through a cork that is about an inch thick. This cork makes a satisfactory handle. The hole made by any of these punches, except those which cut the hole out, will be rough on the under side. This may be corrected either by showing the punch through again from the reverse side or by giving the children pieces of sand-paper with which they can rub the surface; a process which they will enjoy.

It is impossible, at present, to get cards

punched in a desirable way. The teacher should punch the cards herself in the form required, as this only will give the spacing, size and variety necessary.

**Method.** The cards should be not less than five inches in diameter with holes half an inch from the edge. Begin with cards of strawboard or other cheap material and let the children experiment sewing over or through the edge with colored corset or shoe laces. This can develop into ambidextrous sewing—that is, sewing with two threads through one hole from opposite sides of the card. From these, and the single sewing, many suggestions will develop and these can be selected, emphasized or organized and then applied to various uses, such as frame, clock face, needle-book, match scratchers, safety-pin holders, and so forth. When they are organized and repeated the better cards of soft and attractive colors should be used, with the different threads suggested in the list given above.

**Illustrative Series.** Also these patterns should be selected in order of difficulty so that a little sequence should be



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developed, leading to increase of power and a sense of growth and relation. For this reason, after the experimentation, one pattern should be selected and repeated on a better card. After this let the children vary this pattern on the next card if they desire, and so on. Sometimes the teacher can supply an idea for a stitch when she sees the opportunity. Different stitches will suggest different uses. Long and short stitches will suggest the clock face. Crossing stitches at the edge of the card leaving a larger space in the center—the frame: a pattern which covers more of the card, a needle case; and so on. The following series of steps is suggested as an example.

### Material:

Strawboard with or without a needle, twine. Cards (five inches in diameter), punched half inch from the edge and evenly spaced.

The children would have had some winding and the ambidextrous sewing.

With this series the first step would be:

1. Over the edge,
2. Same with return giving the cross stitch,
3. A choice of these on better card making a



frame. Opportunity for choice between two materials and for sewing with or without needles,

4. Sewing around the circle with a needle giving open stitch,

5. Returning, filling the stitch,

6. Choice of combination of any stitches already used,

7. Two circles on the card,

8. Experimentation from this,

9. Selection of a satisfactory pattern, made into an interesting object,

10. Same pattern on an oval form, or repeat on other forms of cards if desired.

These may be applied to square and oblong cards having the corners free and using many varieties of long and short stitches. But this suggestion must be left to the discretion of the teacher. Sometimes she may supply a pattern of this kind. Sometimes there will be opportunity for developing it from the accidental discoveries of the children.

Gradually the same stitches can be applied to other materials and more permanent uses such as the following:

Various kinds of bags and pockets with the over and over stitch at the edge.

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Cross-stitches and the open stitch may also be used. For the cord, knotting may be used, running the cord both ways (see illustration). Girdles for these bags may be made from the knotting and sometimes fringes may be tied in at the lower edge of the bag.

These bags may be for various uses according to the material chosen—purses, marble bags, etc. The crossing stitch may also be used on pen-wipers, mats and holders.

In making these, the points with regard to artistic results and suitable materials for use and purposes must not be forgotten. Also the possibilities of the simple stitches applied. The practice is in the stitch on the card. The regularity of the holes gives a sense of accuracy and neatness, defines the stitch and shows readily the variety possible. The sewing of the materials should be the end worked towards, and should not be given too soon or too quickly. It should register the independence and freedom the children feel in working in this more permanent way.

If there is trouble over it, it is being given too soon. It has, of course, definite relations to the activities which follow in the grades.

Striped and checked materials are good for this later work, as the stripes and the checks suggest the place for the stitches; in many materials, holes may be punched as in cards and in some the children may snip out small openings.

**Decorative Sewing.** At the same time that this sewing is used, the decorative sewing on the cards should be continued as a kind of picture making, using other varieties of cards.

The laying of animal and flower-forms in simple straight lines with sticks may be readily carried over to this card-sewing, and is full of suggestions, both esthetic and practical.

**Free Sewing.** Free sewing has been referred to and can be worked out into many interesting series. Madam Kraus Boelte's book "Sewing without a Needle," published by Steiger, will give all the directions necessary for this work. Some of the free sewing precedes the sewing with a needle and these together give a type of sewing from which the weaving develops.

## SECTION V WEAVING

A very simple loom results naturally from the sewing, as the circular card provides the loom, and the reinforcement of the edge the under and over stitch.

**Method.** A circular card, six inches in diameter, should be used, equally spaced with sixteen cuts, half an inch deep. One cut between any two cuts gives the odd warp string necessary.

A simple way to begin the work is to use the punched hole card and let the children cut from the edge to each hole. Wind the cord across the card into each cut, then with the cord as the weaver begin in the middle and weave over and under around until the edge is reached. Tear off the card loom and add decoration and strength by using any of the former stitches in sewing over the edge. For the loom use strawboard and for material use cords of different weight or different kinds of raffia. The little mats when taken off may be used for many different purposes, such as table mats, holders, baskets, bags, etc.

They should be done several times with dif-

ferent materials and for different purposes that the child may gain skill and dexterity.

On this same principle, very interesting frames may be worked. Take a six inch circle. From the center of the card, cut a three inch circle. Proceed as before, only that in this, the cuts are on both sides of the circular frame. Wind through the cuts and reinforce the edge, but do not take the card off. One or two colored threads may then be woven in. These frames may also be made on an oval card with an oval opening. After the frame is finished while doing the reinforcing stitch at the edge, the strings may be carried across the back, making the support for the picture.

The backgrounds supplied by the cards for these frames must be considered here, as they enter into the decorative scheme and many different stitches may be worked out.

**Processes.** In the weaving in these frames, let the color, rather than the introduction of two different kinds of weaving materials, provide the note of variety. And the contrast between background and weaving material must be considered.

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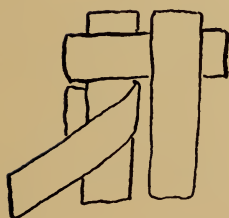
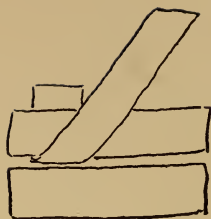
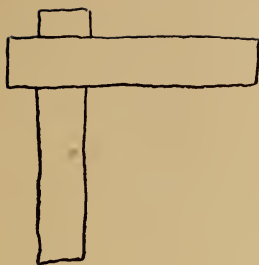
## PRODUCTIVE ACTIVITIES

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This circular loom provides the simplest form of weaving proper and introduces the regular work. With this, the process is continuous and there is no confusion therefore from the idea of reversal. There is, however, a simpler process of weaving paper strips which might precede this and is introductory to the whole idea.

Each child is given one square of coated paper to divide into four strips. Place one of these strips on the table running from left to right. Put a little paste on one end and place the end of another strip on the first, white side up and running the other way. (See diagram.) Crease the first over the second strip, place a strip under it, paste on this and press the first strip down.

Crease the last strip over the first and place a strip across color side up. Paste. Thus a mat is made. By alternately adding strips at top or side, by the same method (creasing and pasting) a mat of any size may be made. For the larger size oblong sheets of paper should be used so that the strips may be longer. Practice may be given with many kinds and colors of paper, and widths of strips. Also



FIRST STEPS IN SINGLE STRIP WEAVING.

The mat may be increased to any size by using longer strips and continuing the process.





unequal widths of strips may be used together, and space may be left between the strips. These small mats may be used as transparencies, in decorating lantern sides, in the doll's house, and sometimes merely for experiment.

The next step will be the making of a paper loom. Use two toned paper and for each child provide nine strips of paper. The children proceed as follows:

From four of these they make a square by lapping the ends.

In the middle of the frame paste a strip from front to back and one more strip at each side of the center, at equal distances. This is now a paper loom.

Under the middle of the middle strip pass another strip. The children will then easily place a strip front or back of this strip. (See diagram.) The strips are not to be pushed close.

**Development.** An advance on this is to use ten strips to make the mat. Place a strip front and back of the middle one. It is desirable that the children in time cut their own strips.

The next step would be to introduce the un-

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even warp and even filler. In this loom instead of using the white side of the paper for alternate strips it is better to use two shades of a color and let these provide the alternation. These make pretty transparencies when a sheet of tissue or lighter weight painted paper is pasted behind the mat.

In the spacing of the strips much attractive variety may be gained.

The children may also paint or crayon the paper used. In this one activity, through painting, folding, cutting, spacing, weaving and pasting, the children may combine in a simple way many previous experiences.

This is one of the many simple types of work in the kindergarten which have been known to carry over into the home. Any child can divide paper into strips and will find many ways of applying and varying the weaving.

For group work in the kindergarten, looms may be introduced, made of heavy card-board and of light wood. These should be of good size and the children should be allowed to set the warp over the edge or through the holes.

This makes an opportunity to take care of

materials contributed by the children, and can be turned into general use when finished.

This, with the other types of weaving spoken of previously, form a sufficient introduction to the making of hammocks and weaving on individual looms in the primary grades.

## SECTION VI DRAWING

**Introductory.** Drawing in the kindergarten, while one of the most valuable activities, is one that is most often misused. This results from two things:

First: A certain naïve enjoyment on the child's part, combined with a very slow achievement of skill in the art, as such.

Second: A misunderstanding of aim and value on the part of the teacher.

Therefore, while the teacher feels that it carries with it so much expression and pleasure that it must be educative, her sense of its educative value is very vague and there is a tendency to use it in a recreative way only. It is a temptation to the young or careless teacher to occupy the children in this easy way while giving big sounding reasons for its

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existence. Like all other things which do not move out, it moves down, and, given purposeless expression, very often the child does less definite and meaningful work at the end of the year than in the beginning. On the other hand, the conscientious teacher, who believes in the growth and purpose in the drawing, and has put an emphasis on the artistic or representative skill of the work, very often endeavors to get results of performance in a way that the child is unable to give them naturally. Therefore, his spontaneity of expression is overlaid with a certain forced imitation of external accomplishment, which is really the seeing of the teacher instead of his own.

**Significance.** The child's drawing must be conceived of as a language; it is, in reality, picture writing, and there must be a long period of learning to use the language before representation proper can be expected. When we do not see the object at all, except as a rather indefinite mass, with one or two marked characteristics, but no parts as such, how can such far away non-essentials as proportion, light and shade or perspective enter into one's calculation? Where every-

thing is an idea rather than a representation, and where the mind supplies the life and reality if it is not seen, how futile is the attempt to push a point of view which supplies by technique, elements to replace actuality.

For instance: every child draws both eyes in the side of a man's face—he thinks of both, and half that face would be only a half man; to supply the idea of the whole by technique of representation would be to a child (if he could let you know it) awkward and uninteresting.

Again: once an idea of an additional characteristic of an object awakens in the mind of a child, it assumes such prominence that it must for a time have more attention. When the chimney on the house comes into view, it is given with joyful repetition; the stairs are for a while the only reason for drawing houses, and the only style of architecture to be seen resembles the Swiss Chalet. Fingers, buttons, the legs on animals, the windows in houses—each for a while absorbs attention, not only in number but in size, and only after this seeing activity is satisfied, can it be brought into relation with the rest of the drawing.

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Now, if the teacher at first can think of the drawing as the development of seeing power, and then use every opportunity to connect the seeing with simple composition, the more complex elements of representation can afford to wait until the mind is ready for them. To a large extent, the direction for this drawing must be by the individual teacher, but a suggestive outline is given here.

**Materials.** The material used should be sheets of manilla paper as large as can be obtained and conveniently managed; charcoal or India ink with heavy Japanese brushes should be used as well as a pencil. All these will give a soft broad line, stimulate large free movement, and quickly pass into some kind of mass representation. Pencils should be soft and black with broad points, or crayons can be used, when a broad, soft point can be obtained.

While the line should be soft and broad, the teacher should not be distressed because of the line. We hear much discussion nowadays of the necessity for leading the children quickly into mass drawing, and many methods have been tried; yet the children re-



turn again and again to the outline drawing and their natural impulse is to draw in this way. This, instead of distressing us, should lead us to consider more carefully the spontaneous activity and to look upon it with more respect.

Children need to get the boundaries of objects first and lines represent much more readily than mass drawing, unless light and shade is used. We can see how long the race expressed itself by line representation, before the more complete power was gained, and it is very probable that children do not see form at first, except in outline. Psychologists tell us our power to see things in three dimensions develops through motor perceptions and if so, children must come to them the same way. While these are accumulating, ideas of things, which are not representations or pictures of things as such, would very naturally be expressed by lines.

**Movement and Method.** The general movement of children's drawing proceeds from the drawing of people to houses, then animals, then people in action, then, last of all, some sort of composition in a very vague and

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simple way. This does not mean that a new interest absorbs all the attention. The child will still draw people while he is drawing houses, but his interest very often centers in a new idea for a while.

Two methods should be used to increase the child's power to see and to tell what he sees. First: the connecting of motor activity with the drawing. The feeling of things is a help to comprehension and a doorway will be a better doorway after the child has tried to reach to the top of it, and has stretched across it. A table will have more contrast after the child has walked around it and felt its edges. This may be carried too far, but as a principle it can be widely applied; an original teacher can make it most valuable.

**Standards.** Second: the standard develops through the best drawings being looked over and discussed, and through the children and the teacher drawing for each other. In this criticism of the drawings, or rather in this friendly discussion, attention can be drawn to what is lacking and also to the want of proportion and natural contrast that is involved. But once again the fact

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must be emphasized that the action element in seeing should be the chief avenue of understanding.

In the talks about the pictures, if a man has no arms attention can be drawn to the fact by saying "How do you lift your doll or your baby?" rather than by saying "He has no arms." Through the emphasis on doing things, the structure which makes it possible is more clearly felt and observed by the child.

Again, when drawing attention to proportion, awaken the observation, instead of speaking of the fact. If the boy and the man are the same size in the picture, instead of saying "Men are bigger than boys," notice the difference in a suggestive way. Ask the child to notice if the big chairs fit the big people and the little chairs little ones, or if he has to look up in his father's face to talk to him.

The same method may be used in talking of landscape or interior drawing. Naturally much of the understanding of the relation of trees, bushes, roads, sidewalks, houses, etc., can become a part of the experience through walks and plays.

The drawing of animals should be devel-

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## PRODUCTIVE ACTIVITIES

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oped through the nature work in the kindergarten where animals are kept, fed, cared for, made companions of and played with. Indeed, like everything else in the child's life, this activity of drawing is a part of all his experience. Life is still a whole and while it gets a certain emphasis in expression, now at one time and now at another, in reality each experience is reinforcing and offering opportunity to every other all the time; so that the clay work, painting, songs, talk, building, walks, stories, everything is constantly helping the seeing power.

**Composition.** As facility and discrimination develop, the telling of a story, rather than the drawing of a thing, becomes the next step, and here the beginning in composition can be made.

Cutting and tearing are related to the drawing very closely and offer the same possibilities in developing this training. Drawing the same picture several times in different ways is of value. New ways in telling a story, using perhaps the same objects and figures, and placing them in new relations. It is also well to talk over what shall

be put in the picture before it is drawn and then to select only two or three things and make a picture of those.

It is very suggestive and valuable if the teacher will occasionally have an exercise where she draws on the board for the children; discussing with them the picture and how to carry out the idea, never forcing imitation, but merely letting them watch the performance and compose the picture while she executes with greater skill and speed than is possible for them.

Another way to develop the idea of composition in connection with this is through pasting exercises where the children are given certain units of good form and color and allowed to put them together to make the picture after free discussion and trying them in different relations.

**Rhythmic Drawing.** There is another type of drawing for developing control which should accompany, or parallel, this language drawing, or picture writing: a rhythmic covering of space with steadiness and regularity which gives a new type of motor control and a new result in experience.

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This can best be done by the circular movement, with both hands first, then with each separately in birds' nests, caps, balls and other things, using as large, free and steady a movement as possible, all working together with the teacher to a rhythm. Sometimes verses and rhymes may be used for the music or measuring of the rhythm and sometimes counting may be used.

**Insets.** This should then become the filling in of spaces or around spaces that are outlined, somewhat as the children fill in Madam Montessori's insets. The filling in of spaces is an old activity of the kindergarten, but these have usually been of objects that are connected with experience such as leaves, animals, balls, etc.

A satisfactory way to make the outlines is of straw-board to be placed on paper and filled, and for the second stage a broad line made by a glass or stylographic pen with India ink.

This again receives new expression in the cutting when the object is to be cut from the frame, as the children call it, and both are pasted on contrasting colors.

The filling of these spaces should be definitely directed, rhythmically executed, and should be considered a really technical activity; it should result in a soft, smooth surface, well and evenly colored with large free lines.

In all the drawing "puttering" should be discouraged and a certain swiftness and largeness of execution should be the standard. It is much better that the child should have the habit of doing something with a feeling of carrying his idea to an end with movement and decision, even if he finds it unsatisfactory, rather than that he should putter. Let it be the habit to make the picture and then to make another better and another, rather than to be occupied on some little doing for the whole period.

The drawing is so closely related to the painting and crayoning that the discussion of these activities will now follow.

## PART II COLOR WORK

**Introductory.** The crayoning, painting and paper work in the kindergarten should be grouped together under the head of Color Work, just as all the paper work that is used constructively should be grouped with the clay and sand and building and be designated Constructive Work. By doing this we gain two advantages. For one we come a little nearer to the unity of the child's experience, and for another, we do away with some of the complexity of aim and purpose which sometimes fills the kindergarten programme with too much variety. If we see one purpose in the activities and each one is reënforcing and enriching another, the fact that the material differs is not important. In this book these subjects are discussed in this way; and it is hoped that those using the book will get the point of view, and see many ways of adapting the principles that are not indicated here.

Just as the drawing had to be thought of, as a language, in the beginning, the color

work must be thought of as an avenue of experience and experiment for small children. Color is delightful and interesting to them and they need to be able to use it and enjoy it in many ways. The color should include, not only the use of paint and crayon, but the play with light and reflection, bubbles, shadows, rainbows and many attractive materials in sorting and arrangement, in experience with flowers and fruits, and with many color tops and toys which they can make themselves. Also, if the teacher can make interesting color in the kindergarten in simple ways, or in the material used for the exercises, there is much unconscious education.

**Environment.** A soft brown scarf on the table with a bowl of yellow daffodils on it, a wall space covered with a shaded golden paper, with softly colored orange chains and papers hung upon it, a harmony in pictures carrying the eye through some interesting tones, to a spot of emphasis in some brighter tint, all tend to increase the sensitiveness of appreciation. And let us recollect often that the younger we are, the more unconscious are we of the influences



that affect us. The period of the young child's education is for the teacher, as for the mother, a period of faith. It is nurture. "The constant evidence of things hoped for, the substance of things not seen."

Through conditions which nurture, that which is as yet dim, unformed and vaguely struggling towards expression, the power slowly strengthens and at length fulfills itself. But it is the conditions which we must control and leave much freedom of response to these conditions, selecting, emphasizing, encouraging, but not forcing or demanding. Froebel has few sentences wiser than this: "The period of childhood is pre-eminently life for the sake of living; that of boyhood following is life for the sake of learning." In other words, childhood is for the sake of experience, for getting sensation, actual contact, not for the sake of knowing or of getting information, as such.

**Materials.** The color work, then, begins with the younger children in the blowing of bubbles, the making of tissue paper chains and flowers, the sorting of papers, of marbles, of beads, and other pretty bright objects.



In natural activities the enjoyment of flowers, and fruits, the play with bright spots of light, and refracted lights in prisms of many kinds, the play with shadows and with objects seen through colored glass; and with any active form of color experience which is found to be legitimately useful.

The older children then take up work with crayon, or paints, and paper, and begin to apply the experience. Of course, these plays with color would be used also with the older children, but the work with them would be connected with the productive exercises. Any material which will give experiences of light, shadows, transparencies or reflections is good to use, and the prisms used should be in chains and drops of many sizes and shapes. Pretty pieces of colored glass, bowls of water, small mirrors or polished surfaces which reflect easily, all make good experimental material. Sometimes, even, books of colored tissue samples are interesting to use with other kinds of sorting material in giving color experience. The soft tints and many colors often give much joy to small children.

These should be used freely by the chil-

dren, but also part of the play should be organized and directed by the teacher. The children's attention should also be drawn to any experience such as the beautiful appearance of the stems of flowers seen through water and glass, and added delight may be given by letting the children experiment by placing these vases on mirror or glass. A bit of iridescent glass is interesting, especially if very thin, and icicles often give very lovely scintillating color.

## SECTION I SOAP BUBBLES

**Materials.** Play with soap bubbles may be made a very educative experience, but must be well organized. It is excellent physical exercise, as the blowing and the throwing of the bubbles expands the chest and uses the large muscles of the body. Make a strong mixture of soap and water, using a good yellow or floating soap. Put in a teaspoonful of glycerine for each quart of water. Provide clay pipes. A fairly large bowl for each half dozen or ten children is better than a number of small bowls.

These bowls should be put on the tables, but the children should be allowed to stand as they must have freedom of movement.

Another point in favor of this exercise is that it makes excellent work for out of doors and the experience gains both in beauty and value by being conducted there.

**Method** At first, as in most activities, experiment should be the order of the day, but after a few minutes the children should take turns and watch each other, five or six standing in line, each one blowing a bubble. When all have tried they may watch the teacher blow large ones. Then she may blow one and shake it off, allowing the children to keep it in the air by blowing under it without pipes. Then they may take turns at this and at blowing the bubbles in the sunshine, where the reflections and color can be seen.

Other exercises for other days may be these repeated and extended, also the blowing of bubbles in turn while the class counts. An excellent opportunity, since the children will take long breaths so as to blow to a high count. The blowing of bubbles and shaking them off to roll down an inclined board, which has

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## COLOR WORK

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been covered with a rough cloth or shawl; the placing of them gently on bottle tops, or on the tops of mugs or tumblers—indeed, there is no end to the interesting things that can be done. But the teacher must always have in mind three things: the growth of the activity, the physical advantages involved and the opportunity for developing the art side of the play. A well organized and happy play with soap and water is in any event a great delight, but it also contains possibilities for producing and making use of color and form in many surprising and delightful ways. In this, as well as in all the work with color- or sense-play indicated above, each teacher will find many sources for new suggestions. Analysis of color, knowledge about it, is not to be sought after. It is love of beautiful color, experience with it, joyous delight in it, and desire to produce and use it which is the aim.

## SECTION II PAINTING

**Experimental Painting.** The first work with paint and brush is, of course, the washing of surfaces with plain color. At

**Free Washes.** first the paint should be mixed for the children; for the business connected with good mixing is too long and tedious a process for little children. A large sized Japanese brush is a good tool for the first painting, and they should be taught to hold it correctly and to use it with a free movement from the first. Another element of success lies in good preparation.

There must be plenty of water near at hand and extra brushes.

**Suggestion.** The failure to recognize the value of this additional material will often break up interest in the activity and carry over into the child's work a consciousness of effort to get right conditions which should not be his concern. Also, the value of suggestion is lost.

The child who sees plenty of clean water and brushes at his disposal is more liable to get the impulse for clean, pure color than one

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## COLOR WORK

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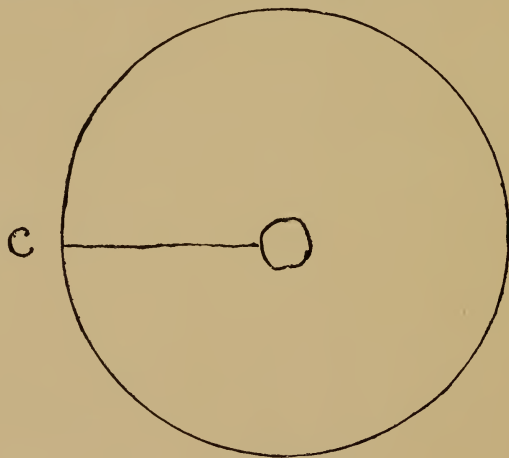
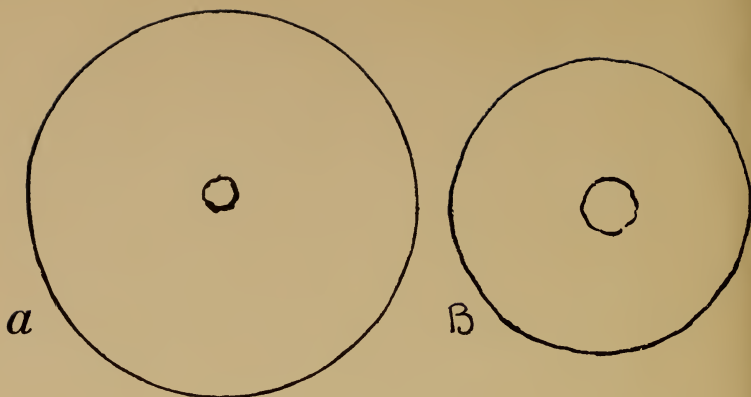
who lacks freedom in conditions that produce good results.

Attention to details makes for success. This cannot be repeated too often, and with regard to this a word may be said of the use of appropriate and interesting utensils for the painting.

Just as an attractive piece of paper placed under a basket, or flowers carefully arranged in a jar instead of a bottle, add much to their beauty, so an interesting set of mugs and pitchers will contribute to the setting and add much charm and incentive to the exercise.

Contrast the usual collection of saucers, jelly glasses, or other unsightly tumblers of several sizes as receptacles for water, with an array of simple strong bowls of one kind, of good size and form and soft color. These need not be expensive to be beautiful. They may be obtained at the department stores at almost any time for sums less than ten cents. It is through these means that an atmosphere is built up around the children. The child who can take his own quaint mug and supply himself with fresh water from the larger vessel like his own, gains not only an impres-





COLOR TOP NO. 1.

Make a circle of strawboard. Put wooden skewer through the middle. Color and cut circles to fit on this. These can be of one color, or of rainbow stripes or as in B and C—of two sizes with contrasting colors—or two slit as in C—and slipped under each other half way—of two colors. The spinning combines the colors.



sion, but a delight that gives much inspiration.

**Development of Method.** Order is an essential element of art, and uniformity and beauty of materials encourages the appreciation of this order. It may be well to have practice first with water only before using the paint. These exercises in washes should be combined with free experimentation by the children at the end of the directed work. Variety may be obtained by using different sizes and colors and shapes of papers and using them for different purposes. Some of these purposes are coloring paper on both sides, for units for stringing. Coloring paper on both sides (a different color on each side) for color tops, making color circles for color tops. (See description and diagram.) These color circles should be of different sizes and can be used in many combinations. Coloring papers for construction work, also for making fans of two kinds.

The washes may then be done in two colors, and following this in several combinations, such as colors side by side, making rainbows. These can be used for the same purposes as

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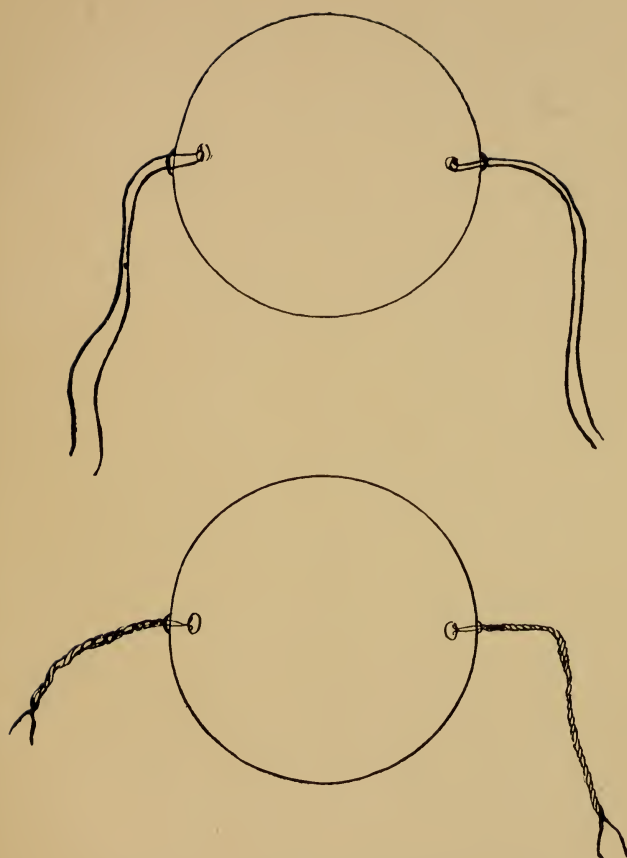
## COLOR WORK

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the plain washes. This leads readily into drop painting, which should be the next stage.

**Drop Painting.** The drop painting is an adaptation of the wash. Small portions of the paper are washed in place of the whole surface and in these spaces the water collects, in this way providing more water to play with, rather than more space to color. Instead of inducing the spread of the brush, encourage the suggestion of dropping the paint through the making of these miniature pools. For this the paint box, or pans, must be used rather than the mixed paint. The six color box is the best as the child is not confused with too much mixing of paint (this also takes too much time for young children) and there is a sufficient number of colors to satisfy his needs. In the first work with the dropping, use medium-sized papers. Wash these with sufficient water to carry the paint, that is, the paint must be able to run freely. As this work is largely experimental, the child should be limited to one color, but should be allowed to fill the brush as often as he feels the need.

After the paint has been freely dropped on



COLOR TOP No. 2, WITH STRINGS INSTEAD OF PEG.  
Color differently on each side. Twist threads and spin.



the surface, it should be run together by the moving of the paper without the use of the brush. The gain from the pleasurable experience in the new way of mixing water and paint gives sufficient interest in the activity without bringing about the confusion which would come from the mixing of colors at the same time that he is mastering a new process.

The next step, however, would consist in the dropping of two colors. With the three- or six-color box, any two colors may be used.

After dropping the paint from the two colors chosen, the children should then be encouraged to run the spots together and watch results. The painting may be considered successful if the color is clear, clean and bright.

Therefore, as has been said before, the paint must not be mixed with the brush, and careless dipping must be quickly criticised. Many combinations can be obtained through the predominance of a certain color, through the amount of water used, and through the way the colors are arranged to run together on the paper. Different shaped papers may be used,—for instance, circles, squares, half circles, etc.

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## COLOR WORK

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Some of the best uses for this kind of painting are the following:

Representations of bubbles, eggs, balls, papers for kites, fans, lanterns, backgrounds, both circular and square for window transparencies. Also tops and many of the other objects already made in the plain washes.

When the large sheets have been used, the children may be supplied with outlines of definite objects, which parallel the finders used by artists, and with the help of these may discover the most attractive bits of color on the sheet.

These spaces may then be outlined and cut out. If tissue paper be pasted on the back of these outlines and these hung in the window, they make pretty transparencies, while the cuts may be pasted as units.

Another development of the painting is the blobbing work.

**Blobbing.** "Blobbing" is the making of a spot by laying the brush full of paint flat upon the paper. When the brush is lifted, the color collects at both wide and narrow ends of the spot and gives effective gradations of color and form, which lend themselves to

many suggestive combinations of nature- and art-forms.

Some skill is developed in the handling of the brush. By altering its position, much variety is made possible. Many good outlines of this work have been published as the method has been used in England for a long time, and is now common in this country.

Another use of it is the following: A blob may be made in the middle of a small piece of paper; the paper should then be creased along one of the axes of the spot and an interesting and unexpected suggestion will result. Lines and spots of color of different size and shape may also be used in this play experimentation.

After blobbing is discovered, a more refined type of brush work may be done, where the children really make an attempt at a small artistic effect.

**Picture Making.** Borders of green stalks and leaves with little spots of color introduced are effective, and lovely sometimes.

Also simple mass paintings of flowers or fruits in season may be begun. Generally, suggestions for these will have been found in the children's free painting, which should have

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## COLOR WORK

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been accompanying the other from the beginning, as well as in the quaint little forms spoken of above.

The children's free painting should be for two purposes—to give a broader expression and to provide for the teacher an opportunity to watch and learn. She should paint with the children at these times, as she draws with them, and she should encourage them to attempt picture making, such as water with boats on it, children in green fields, birds, and bird houses, etc. Often it is well to give them a whole period in which they make these pictures with India ink and Japanese brushes as the paint goes on so smoothly and the result is gained so quickly. The best of these may then be repeated in the ink or in color.

## SECTION III CRAYONING

The crayoning for little children is another form of color experimentation. But it leads more quickly into decorative representation. The crayons are not in some ways as satisfactory material as other kinds of media. They are too waxy. They break too easily

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and the crayon is too tightly wrapped in paper.

**Materials.** Chalk wrapped in tissue paper, or in tinfoil, gives more satisfaction than the crayons as generally found. If crayons are used, however, they should be as large and soft as possible. The paper in this work is not as important as in other things. Almost any kind of paper will do. A glazed paper takes the crayon easily, but does not make a satisfactory background. A paper of a soft shade is more satisfactory than a plain white. A soft green, blue or tan, is often pleasing, although for general use a yellow cream is the best. In these the color background supplies part of the idea. A soft blue paper, with horizontal lines on it of a darker blue and gray or white upright lines, easily suggests ships on the water. A soft green, or brown, with lines and spots, suggests flowers growing, giving opportunity for selection of color. It is well to use papers of varying shapes—ovals, oblongs, squares and circles. These give new suggestions and interest. The paper may be sometimes crayoned for a background.

The work in crayoning, as in the drawing,

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## COLOR WORK

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is so free and suggestive in character that the  
**Presentation.** method of presentation is of  
much importance. The details  
should be well looked after and the right way  
of working established in the beginning, by  
playful imitation. In the first exercise give  
each child a crayon and a piece of paper.  
Though each child should have only one  
crayon, the crayons of the class may be  
of different colors. The paper, if too large,  
will discourage the child and will induce  
carelessness in the strokes. The child's  
desire to cover the paper will result in  
scratchy and broken lines and a wrong stand-  
ard will be set up in those first undertakings.  
An easy stroke of the hand, back and forth,  
should be sufficient for the width of the paper.

**Playful** With playful experimenta-  
**Experimentation.** tions and helpful suggestions  
from the teacher, often arising  
from the children's own remarks, the space  
will soon be smoothly covered and these pa-  
pers may then be used for construction work,  
free cutting, stringing and pasting. These  
crayon papers will serve for many of the pur-  
poses suggested in the painting. They are

especially good for paper plates for festival occasions, covers for books, envelopes and portfolios, and may also be used effectively for toy screens and fireplaces. This crayoning moves over to more definite and regular expression in the decoration of papers with lines and patterns to be used in the making of furniture and wall paper for the doll houses.

A simple suggestion of chintz patterns is easily obtainable and can be folded into most delectable chairs and boxes. (See furniture.)

If the children use several colors in combination varieties of bands and stripes in any free relation, desirable looking rugs will be the result. Sometimes interesting lines and spots will appear and a word from the teacher, pointing to the more conscious repetition of these, may often develop a suggestion into something worth while.

The making of a spot larger, or smaller, a slight change in relations, the connecting with lines, or the addition of a line or two, will surprise and inspire the child with the undreamed of possibilities in his own undertakings.

## SECTION IV TISSUE PAPER WORK

Another delightful and child-like phase of the color work is in the possibilities in the use of tissue paper. This has been suggested in the section on stringing, but many experiences of value may be gained in the making of transparencies, balloons, or other toys. The transparencies may be made in several ways.

**Color play.** The first step is in play with square and circular pieces of tissue paper (of different sizes and colors cut by the children). These should be sorted and matched and experimented with by letting the light play through them. Different colors and two or three pieces of the same color may be placed over each other, thus mixing colors and giving tints and shades of the same color. If different sizes are placed over each other, the border will show the original color and the center the combined color. This may also be reversed, giving the children the clear center and combined outline. The older children should cut these papers for themselves.

After much experimentation with these,

the ones that are most valuable as well as those  
**Transparencies.** that the children like best may be selected and hung in the windows as transparencies. More elaborate ones may be made by putting within the sheets some pressed flowers, bit of free cutting, or small picture contributed by the children, this appearing as a shadow in the frame. Interesting cuts in the enclosing papers may be made, through which the light appears. (See section on frames.)

**Toys.** The balloons make a very interesting toy for the children. Cut a square of tissue paper 10 x 10. Fold this over on the diameters and on each corner a triangular piece of fairly stiff card should be pasted. A hole should then be punched in the middle of each card. Four strings should be put through these holes and knotted together a sufficient distance from the balloon so that it can lie flat when folded. Twist the four cords together and put them through a half dozen circular pieces of card. Tie a knot in the end of the cords. When the balloon is opened and dropped from a height, it is a small sailing parachute. This should

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## COLOR WORK

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not be made by the children until the material for it can be prepared and put together by them.

A good tissue paper plaything for the smaller children is a large ball made from the crushed squares, or circles, of the paper. A long string should then be tied to this, and the other end fastened to a long stick. This can then be twisted and untwisted on the stick. The strings should be knotted, or twisted, by the children, and colors may be used in both paper and string, singly or in combination.

### PART III PAPER CONSTRUCTION

This section comprises Strip Work, Pasting, Tearing, Cutting, Folding and Construction Work. The material used is different textures and weights of paper, and of these there should be great variety.

**Historical.** In the early days of the kindergarten, the special material for the paper work was of two kinds, a thin paper for folding and a heavier kind, colored on one side, and marked on the reverse side with guiding lines, for cutting and pasting. Both these papers were 4 x 4 in diameter and the formula which controlled their use was the old phrase of "In, out and both ways."

The next step in advance was the enlargement of the paper to sizes of four, five and six inches, and the omission of the guiding lines. It was not customary, however, to use any other kind of paper than the special paper provided.

The last, and best, advance has been in the use of many kinds, sizes, weights, of paper; in the relegation of the more refined papers to the cutting and decorating work; and

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## PAPER CONSTRUCTION

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to a final step in some process as giving a more finished result.

The old principle of "In, Out, and Both Ways" still governs much of the modern work, but its application is more in relation to the child's experience. Indeed, it parallels so closely the principle of variety in art that it is often used by kindergarten teachers from that point of view without their consciousness of its place in Froebel's method. If thoroughly understood, it has a value in the fact that being such a simple statement, it can be used so as to give a steadiness to the work and a variety which stimulates suggestion and invention. Its application should be broader, however, than it was formerly, and it should be interpreted according to the essentials demanded of any expression of art.

It was used in this way:

In folding, if the children made a form in which all the corners of the paper were folded to the center, the next step would be to fold all corners back to the edges of the paper; the next would be to the edge and back again—being both ways—or, in sewing, if a line were made one space long, the



next line would be five spaces, and then some combination of these, or some arrangement of lines, leading from one to the other. Or, one line would be made vertical, one horizontal—its opposite—and the combination of both a new expression of these.

The principle was too formal, and adhered to in too formal a manner; but the idea of contrast and variety, through combination, or development of their experimental contrasts, is suggestive, and gives the children much experience in a simple arrangement.

A small child is in the "contrary suggestion" stage of growth where extremes meet and suggest each other automatically, as their language often shows where one word will be used for the idea and its opposite, thus again repeating racial history. The teacher, however, must understand the wider and more fundamental uses of this method; and its relation to the expression of variety in art and construction. She must emphasize, select and help the child to organize in interesting and regulated, though not rigid and formal, ways.

Another opportunity for the growth of both

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## PAPER CONSTRUCTION

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child and teacher lies in the appropriate selection of the papers to be used.

**Materials.** Many kinds of papers should be experimented with, but among the best are the Bradley and Prang construction papers, the Art Poster papers, Manilla and Bogus papers; among the cheaper papers, rough brown butcher's and wrapping paper. The wrapping paper of the present day is strong, serviceable and attractive, and can be obtained at so little expense that nothing better can be found. The tools in use are the fingers, scissors, brush and paste. The paste requires consideration.

The pastes recommended are flour paste, library paste and gum tragacanth. The following is a good recipe for flour paste: Dissolve one teaspoonful of alum in one quart of lukewarm water. Stir into this, two teacups of flour, being particular to beat out all the lumps. Stir in as much powdered rosin as will lie on a dime and throw in half a dozen cloves for pleasant odor. Have on the fire a teacup of boiling water and pour it on the mixture, stirring well all the time. Let it boil, until thick, then put it into an earthen

vessel and let it cool. When cool, stir in a small teaspoonful each, of oil of cloves and of sassafras. Cover and keep in a cool place. Library paste is often better if mixed with a little water. Gum tragacanth can only be used with light papers that stick easily.

**Presentation.** There is a difference in the presentation of the pasting and painting. In painting, the atmosphere is possible because the material suggests beauty, but in the use of paste the work is sticky and unbeautiful; it suggests workmanship rather than decorative quality: therefore, it is permissible to use for receptacles anything that suggests convenience and order. Uniformity there should be, but beyond that and cleanliness it need not go.

Therefore, small butter plates, or pieces of strawboard, cut of a uniform size and shape, are satisfactory. Any carelessness in the appearance of them is, however, inexcusable. Hard wood slats for pasting are often preferred to a brush.

## SECTION I CUTTING

### Experimental Activity.

The first work for the little children should be simple practice with the scissors, giving them the activity of cutting which is always pleasurable to them, and the control of a tool. This may be done in several ways. The selection of the scissors helps, or retards, their progress. The best scissors to use are narrow and blunt pointed ones, not more than five inches in length. The scissors should move freely. If the hinge is stiff, it should be well oiled and worked until free. It is important, also, to teach the children (by imitation, if necessary) the best way to use the scissors. Short cuts made with the ends of the blades should be discouraged. The paper should be placed between the blades as near the hinge as possible, and the scissors brought together, giving a long clean cut.

Tearing for the little children is not a separate phase of this work, but should be used in connection with other forms of work with paper. There is a mistaken idea, suggested, no doubt, by the apparent freedom of the

process, that tearing is especially suitable work for young children and should be emphasized. The tearing of pictures requires some degree of definite imagery and skill that is not possessed by little children, and the possibilities of the tearing of strips and fringes is soon exhausted, not to mention the fact that paper tears easily and unexpectedly and often spoils results when the power to control them is still weak.

This rather indefinite tearing of paper into bits and strips, and the making of heaps and bunches of different sizes, and so forth, is really a home occupation and generally more enjoyed by very small children.

In connection with the first work in kindergarten, however, it is a good thing to let the children know the material through the tearing process. The paper that is given should be cheap soft paper that tears easily. First give the children small pieces of paper and let them tear them experimentally. Let them tear them in any way desired and put them to any use suggested by the pieces: Sometimes these may be strung, sometimes pasted and sometimes used in forms of play. The next

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## PAPER CONSTRUCTION

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papers given to the children may be marked with a dressmakers' tracing wheel and the children may tear these, thus approximating a definite line.

A simple device to encourage this satisfactory tearing is to make holes in the paper with a nail or punch and let these give the direction. About this time the children would begin to use the scissors and very often the thing which has been torn may then be cut. Fringes, or napkins, strips for chains, and so forth, make good practice work.

One of the simplest activities that is rewarding is the cutting of scrap pictures, roughly torn. They may at first be cut on two sides so that the children have only to straighten two sides. From this they would go to cutting four sides and to cutting round and oval pictures. In cutting the scrap pictures, select them with reference to certain subjects. For instance, one day the pictures would illustrate the family, another, seasonal weather, another, workmen, and so forth. The opportunity to develop general ideas is large and much of the interest in this work is

contributed by the way it is organized. A piece of construction paper should then be given each child, prepared in the following way: Holes should be punched ready for the hanger, and each child's name plainly written on the back of the sheet. Of course, the color of the card as background would have been considered in relation to the picture.

**Suggestions.** Two purposes of work may be served by this. The child may take it home ready to hang on the wall, or it is prepared as a leaf for a book to be taken home later by the child. If the hanger is used, the strings (not too fine or short) should be ready and each child should have his own when the pasting is finished. No child should be given more than three or four pictures to put on one card, and before pasting them a little play with arrangement should be given. In this way the placing is studied, and when the work is finished it is the first step on the way to some idea of composition.

This leads naturally into several other types of similar work, strip work, unit pasting and



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## PAPER CONSTRUCTION

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arrangement of cut pieces in picture form. These are practically the same activity with different applications, and may be carried on as alternate occupations. While there is no thought of sequence in them, yet they all contribute the same training and, though equally simple, supply enough variety for a constant freshness of interest.

A few illustrations are given here, but to each teacher new suggestions will offer themselves; partly from the children's spontaneous combinations, partly from their experience and environment, and partly from the teacher's own understanding of what is possible, and of the direction which the work should take.

Suggestive exercises in strip work: See plates.



## SECTION II STRIP WORK

In all of these, if a picture can only be made attractively with more material, it should be reserved for a later exercise; but with most things, pictures may be made very simply at first and later repeated with more detail. For instance, the tent can be made with two strips, the ship with two and the window with four. Later these may be repeated in a more interesting way.

**Method.** As the children move along in this, the idea of difference in length and width of strips becomes appreciated. In the ladder, for instance, the uneven width of strip will make a more satisfactory representation than when, as at first, rungs and uprights are equal. Begin with strips of about an inch in width, and vary the width as the work progresses. This also offers an excellent opportunity for sorting, allowing the child to sort his material before beginning his work, and leaving him free to choose the appropriate width for the object to be made.

In arranging, cut pieces of paper, many interesting pictures may be made, and a better

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## PAPER CONSTRUCTION

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effect is sometimes obtained if the work is conducted as a group exercise. But this can be a matter of taste.

The following are suggestive pictures: From a six-inch square make a train. Cut the paper in half, supply the children with two two-inch circles. Each child makes two cars. The teacher makes the engine, adding a long trail of smoke of white circles. This can be joined with the children's cars and pinned up for a few days as a frieze. Then the children can take their cards home, or the work can be repeated, each child making an engine and a car.

Some pictures can be as follows:

### Suggestive Pictures.

A trolley car,	A pigeon house,
A factory,	A boat.
A house,	

### Unit Placing.

These can be made in several different ways. The children may divide their paper as above. They may make them in free cutting or cut pieces may be given them to arrange and paste.

More artistic effects are gained by the last method and pictures made in this way should become the organizing standard for the other work. The more formal type of work, such as unit pasting of fruits, birds, animals, etc., interestingly spaced and arranged, and on appropriate backgrounds, has been so thoroughly developed in magazine articles that it is unnecessary to elaborate it in detail.

It is enough to say that the unit could be developed in three ways: given to the children, outlined for the children to cut, and obtained from the children's free cutting. In the free cutting, the children may repeat the cutting of a satisfactory unit of their own, or may use one of their own for a pattern, drawing around it with a heavy crayon, or the teacher may select one of the children's and use it for a pattern, and sometimes may supply a good pattern of her own, allowing the children to draw around it.

In every instance, very simple units should be used, and often conventionalized lines will produce more decorative and interesting as well as more simple forms. Illustrations of both types are given here.

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## PAPER CONSTRUCTION

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The papers crayoned or painted by the children can often be used for this work and sometimes soft shaded effects are secured.

### SECTION III FREE CUTTING

Free cutting should accompany all of this work, sometimes in connection with the exercise, as in the pasting of the pigeon house, where the children can snip triangular pieces of paper from a strip for birds. Or, in other instances, free cutting would be used alone. In the first free cutting of the little children, it is easier for them to cut the parts of an object and paste, gradually arriving at the cutting of the whole thing; for instance, in cutting a house, the small child can cut as follows: body of house—paste, roof—paste, chimney—paste. The older child would be expected to cut the house as a whole.

The teacher should select subjects for cutting suitable to the child's skill, not requiring him to attempt something too difficult in the beginning.

The cutting of men and animals can be developed as an addition to the simpler forms

at first. In this way the lack of skill in their production will not prove discouraging, since they are not the predominating feature. Later, as skill develops, they may become the center of importance.

**Double Cutting.** Double cutting is work of much value, which should be more consciously cultivated with the older children. Younger children have not enough experience and imagination developed to imagine the other half of the double picture, but the older children can soon appreciate this, and a row of dolls, a row of soldiers, instantly become play material in the hands of the children. With the kindergarten children the double cutting in general should begin with the cutting on a single fold, gradually increasing the number of folds as power develops. It is well to begin with trees as the lines are very simple to follow; next very simple outlines of people can be made; and all these things can be easily and quickly mounted by the children on suitable standards of heavy paper and can be played with. They make excellent toys for the sand table. This moves into interesting double

cutting of flowers and leaves which can be used decoratively, since many units can be obtained at one cutting. The very beautiful leaf cutting which has been well described in the Kindergarten Magazine is in direct relation to this, making a further variety of it.

### SECTION IV FOLDING

**Technique.** In folding, as before, the material should be of fair size, but many kinds should be used, the choice to be dictated by the power of the children and the use of the thing made. The technique to be acquired is in the creasing, and in the gradual accumulation of folds following one another. Here the old rule should be remembered—that one must not expect a child to attend to more than one thing at a time. If we require him to perform an activity which requires accuracy before he is able to do it with accuracy, we actually train him in inefficiency; encouraging satisfaction on a level below the standard demanded.

For these reasons, the folding, as folding,

should not begin too early; that is, it is at first used in connection with other kinds of production, and with the younger children not more than one or two folds should be put in one object.

This is one of the reasons why cutting should be used freely with the folding. A chair or a bed which has a few creases put in it, then one or two cuts, and these fastened, is much easier to make than the same chair or bed entirely folded. Also, the teacher may with impunity fold the first steps in a problem, allowing the children to learn to fold the last one first, proceeding backward, thus in time accomplishing the entire process. The children in this way are not wearied in the beginning by the great undertaking. It behooves the teacher to analyse her work very thoroughly in order that she may discover in each case the point of difficulty and find the simplest method to reach the desired end.

**Illustration  
of Method.**

Illustrations: For instance, in folding the ground form of the small ship set: No. 1, fold the diameters, No. 2, fold one diagonal, No. 3, bring the diagonals together and fold the



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## PAPER CONSTRUCTION

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double pocket. From this many pretty folds may be produced. The point of difficulty is to fit the diagonals neatly together, with the pockets easily coming into place. The whole matter is solved if the children are carefully taught to fold the diagonal on the opposite side from the diameters, that is, to turn the paper over before folding the diagonal. This should be given first with paper differing on the two sides, then alike, so that true independence may be gained.

In the folding of the small barn, from sixteen squares, the difficult point lies in getting the gable end laid flat. This should be carefully studied and analyzed and different methods tried until the simplest and most direct is discovered. It should then be repeated until the child can do it with ease.

To give interest to the repetition, use many kinds and sizes of paper, until each child has many of one thing folded. When he has gained real ease in making the object, let him try variations of it, using papers of different dimensions to put the same folds in, or otherwise changing it.

In making the barn, a simple way of giving



practice in folding the gable is as follows: Fold one edge about to the center (but an accurate measurement is not necessary), turn the paper over and fold the crease in the middle along the shorter diameter, then fold the two edges to this line; now push out the two small squares on each side, thus making the two gables. This may be used for boats, houses, barns and so forth.

The paper may be given to the children folded into sixteen squares, only requiring them at first to make the barn, but not the preliminary folds. This well illustrates the point as mentioned before.

Development  
of Series.

A final step in the folding should be to have the children make for themselves squares and oblongs from large pieces of paper, showing how to get a square by folding from a corner to the edge, and that two squares make an oblong. They can then prepare paper for themselves at home. In this occupation many short series of the same thing are better than the old way of making many things from one foundation. A series of boats, a series of boxes, a series of caps, or of tents, is more

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suggestive and interesting than one fold such as the old "salt-cellar" foundation resolved into other forms.

A few illustrations of these series will follow:

From the making of boxes and boats it is easy to enter on regular construction; in fact, as we said before, some forms of simple construction are really easier than folding proper. The best introduction to the construction work is through the Davis "Cutting and Folding," published by the Chicago Kindergarten College, which is exceedingly simple, very interesting and full of suggestion and variety. The paper folded into nine or sixteen squares is also good, and at first the children should receive the paper folded into the number of squares required, afterwards making the folds. The dressmakers' wheel may be made use of here, making lines which may be cut out by the children. Houses, barns, furniture, sleds, and many other things may be made and various patterns are here given.

**Aim and Possibilities.**

But the teacher must also keep in mind that the fundamental aim is to help the children to achieve true in-

dependence, to do it for themselves and to see possibilities of variations. Therefore, however simple the first steps, and though help may be given here, this help must in time be withdrawn and the child must little by little discover and acquire the whole process.

A good way to make use of the construction playthings is in the playhouses; and the best way for kindergarten children to make these is by using four sheets of construction card for three walls and a floor. These may be tied together so that they will stand, but can also be folded and laid in the bottom of a box in which the furniture is kept. Wall paper, pictures and rugs may be made, and while each child begins with one room, other rooms may be added. Then from the double cutting, the family may be cut and colored and a very delightful plaything is thus made by the child.

A few words on frames for transparencies, or pictures, will end this section.

The color work for the transparencies has been spoken of in the section on color. The

**Frames.** directions for these frames are as follows: Take a square sheet of paper—fold and crease one diameter. Do not open,

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## PAPER CONSTRUCTION

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but fold in half again. Open the last fold and fold one short edge to the other. Open and cut from the center on folded edge, as far as the first line. Open and cut on the diameters right and left the same distance. Fold back the triangles. This gives a square opening. Fold the four edges over to the opening.

The next one made is the same, only folded on the diagonals.

Put two of these together to serve as transparencies, or frames.

Much variety in these can be obtained by folding the edge over in different ways.

A series of circles may be used in the same way. In all of these the edge may, or may not be folded over. (See plate, page 139.)

## SECTION V SIMPLE PROBLEMS

A form of puzzle play is here presented, which in the matching and putting together of pieces, somewhat resembles the "Sliced Animals," so much enjoyed by children.

In fact where the surprise element is strong there are few activities that do not have a peculiar attraction for children.

Added to this there is in the following suggestions a new delight that comes to each child from making his own.

I

A square folded and cut into six pieces.

- |   |   |  |
|---|---|--|
| P | { | 1. Fold and cut into half (two equal oblong pieces). |
| U |   | 2. One half cut lengthwise into two oblongs.         |
| Z |   | 3. Other half cut into two squares.                  |
| Z |   | 4. Cut one square into two triangles.                |
| L |   | 5. Cut one triangle into two smaller ones.           |
| E |   |  |
| S |   |  |

Put together and paste on a suggestive background.

2

- Directions.
1. Fold and cut square into two triangles.
  2. Fold and cut one triangle into boat trapezoid and one triangle.
  3. Fold small triangle into two triangles. Five pieces.

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## PAPER CONSTRUCTION

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### 3

1. Fold and cut four inch square into two oblongs.

2. Cut one oblong piece into two squares.

3. Cut one square into two oblongs.

4. Cut four triangles from the other square.  
Seven pieces.

Another similar type of play may be carried on at a fitting time, with equal satisfaction.

Supply each child with an outline of some simple familiar object, and let him fill in the space with brush or crayon—or if advisable he may draw around a pattern of the same, and cut out the object himself.

After the forms have been crayoned or painted, draw a few broad lines on the back of them, and let the children cut on these to get the pieces. Care should be taken that the lines to be cut result at first in comparatively few pieces to be put together.

There is perhaps no one object more universally useful or welcome than the  
**Envelopes** envelope, and an acquaintance with it is very early begun, in association with some particular holiday, or other festive occasion.

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## SIMPLE PROBLEMS

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### Motives and Purposes.

The breaking of the seal or tie is an experience pleasurable alike to old and young, and the mystery often centering about it delights the children and carries over in a strong desire to make them.

They serve such a multitude of purposes and call up so many fascinating ideas, that it becomes a simple matter to select those to be made, that are well within range of the child's growing power and appreciation.

They are so much in line with regular construction that very legitimately they may be made for immediate occasions demanding them.

It is a long way from the crude unfinished popcorn bag or sack to the dainty sachet envelope or case for Christmas; but the steps in between are very happily taken if they result as they should, at every turn, in something appropriate to the idea controlling them.

Whether it be Hallowe'en, a birthday, or the long looked for surprise wrapped up in a valentine, that occasions their use, the experience in making and receiving them is not soon forgotten, and if there is an occasional in-

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## PAPER CONSTRUCTION

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dulgence in melting the wax for a selected seal by the light of a little toy candle, the joy is increased and the memory of it vivid and lasting.

**Directions.** Directions for making postal card envelope four and three-quarters by twelve inches.

Japanese Manilla used.

1. Place paper with long edge in front.
2. Fold front edge to back edge, open.
3. Fold front edge to middle crease, open.
4. Fold front edge to last crease, open.
5. Repeat same with back edge.

Short edge in front.

Fold over about three-quarters of an inch for flap.

Fold this double edge to back edge, open.

From long edges cut in one center crease, at right and left, as far as first line.

Cut strip off from either half, preferably the one with flap at first, as this does away with cutting out the small squares; paste.

Postman's Bag:

Six by eleven inches—tan construction paper—sometimes made larger—of drilling or cambric for the children to wear.



Short edge in front.

Fold front edge to back edge, open.

Fold front edge to crease, open.

Fold back edge to last crease under flap.

Repeat steps in postal card envelope—Nos.

1, 2, 3, 4 and 5.

Fold paper lengthwise, and on folded edge of flap make two parallel cuts. Carry a strip of a darker shade through this, for strap. Fasten with tongue or in any other characteristic way.

E	{	A simple sequence of four envelopes,
N		
V		folds into a square envelope, and
E		vice versa.
L		Seven and three-quarters inches long,
O		
P	tory size (one-half inch more is re-	
E	quired for flap).	
S		

Repeat steps one, two, three, four, five in postal card envelope, fold short edges together and paste. If made of Defender paper, and handle added, it serves for a purse or bag, as well as for envelope or case.

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## PAPER CONSTRUCTION

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A six-inch square gives an oblong envelope of appropriate size.

An attractive little sachet envelope may easily be made from a five-inch square of heavy striped or figured tissue paper. Crease the diagonals. Fold three corners to center—turn the remaining one back on other side—fold crease made to opposite edge, and turn flap over. A small case should be made to hold the powder. Tie across with ribbon or cord or close with pretty seal. The circular paper lends itself quite as satisfactorily to the making of these forms as the square, if worked by the same formula.

Another very pleasing sachet is made by placing the diagonal of one square upon the diameter of the other, and folding back the eight triangles thus produced, on opposite sides.

Coated Paper

I

Fold Diagonals.

- |   |   |   |
|---|---|---|
| B | { | 1. One corner folded to center, crease. Lines may be emphasized by crayoning.<br>2. Repeat and cut on center line, from side. Fold back for sail.<br>3. Repeat number one and cut on center line from opposite corner. Fold one of the triangles back for smaller sail. |
| O |   |   |
| A |   |   |
| T |   |   |
| S |   |   |
| E |   |   |
| R |   |   |
| I |   |   |
| E |   |   |
| S |   |   |

2

1. Fold square into half—white side up—open.
2. Fold front edge to center crease.
3. Turn paper over—fold short edges together—open.
4. Fold short edges to center crease, open.
5. Fold small square at right and left, diagonally.
6. Crease the rest of the paper into two triangles for sails.

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## PAPER CONSTRUCTION

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### 3

1. Repeat to number four (do not open).
2. Push out the small squares into triangles.
3. Fold other half of paper into triangle for sail.

### 4

**Directions.** 1. Fold two opposite corners to center crease.

2. Fold these short edges together.
3. Place long edge in front, and fold each half of this edge back on center crease for sails.

4. Fold front corner to center crease for boat part.

A more difficult way of obtaining same result as number four.

Fold on both diameters.

Turn paper over and fold on one diagonal.

Open and lay on table, diagonal crease up.

Press down center with finger.

The diagonals will spring toward each other, hold them together, and press down the two squares.

Fold the squares back to show sails.

Fold front corner to center, for boat.

5

1. Fold one diagonal.
2. Place long edge at right side.
3. Fold front corner to left hand corner, crease.
4. Turn paper over and fold front corner to center crease.

The sixteen square folding offers unlimited possibilities for the simple construction of boxes and baskets, and their purposes are without end. Construction paper should be used for these.

With a little ingenuity on the part of the teacher, and a proper respect for the child's capacity and growth, the old may often be made to seem new by the introduction of a few new features. Many familiar steps may be taken by the children themselves, and this sense of mastery over material encourages experiment along original lines.

As for example: The shirt-waist box folded from a six or eight inch square.

From any two opposite edges cut in one square, on middle crease; at right and left of this, make similar cut. Paste the three squares over each other for end of box. The

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## PAPER CONSTRUCTION

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four squares left form the cover, which is re-enforced by pasting the two end squares back upon it.

**Boxes.** A new step can be introduced as follows: Before folding sixteen squares, as foundation for shirt-waist box, turn over about one-half inch on one edge and proceed as before. The edge turned forms the overlapping of the cover. This calls into play new ideas, and starts suggestion as to a means of fastening the cover down—possibly by weighting it with a bead or button, may be by closing it with strap or clasp. In the sixteen square box fold, two opposite edges are cut in a square at the corners, and the small squares pasted over the sides. An advance on this is to cut out the corner squares, and passepartout the edges together. An eighth of an inch added to size of square, folded in same way, provides a cover.

This made either way is a serviceable box for seeds and small material.

**Directions.** By cutting the corner square diagonally and fastening the corners so the triangles are thrown out, we have what is sometimes called the "Butterfly Box."

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## SIMPLE PROBLEMS

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The slanting edges are often curved so as to give the effect of wings.

Another form of box with handle is made by cutting off one line of four squares. Fold two narrow edges together, and from closed edge, on center square, make four small cuts. Turn paper around, and from open edges cut in each side of center square to first crease. Open, paste end squares as before to make box. Divide piece of four squares into two strips. Face the strips to each other, and cut into half the strip. Fit the slits into each other and carry the handle through the openings previously made in the bottom of the box; paste.

Fold into half from open edges cut in one square on center line. Repeat same on opposite diameter. Fold pieces in as far as cut, giving diagonal crease. The three small squares, folded into triangles and pasted back, give a pleasing effect, or the triangles may be cut off and the sides joined in any way desired. Sometimes it is interesting and profitable to use the pieces cut off for decorative material.

A wider range of choice is offered, if run-

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## PAPER CONSTRUCTION

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ning parallel with this we occasionally substitute for the square an oblong piece of paper, and sometimes when using square paper, fold and cut on the diagonals in practically the same way.

The set of furniture here pictured is constructed from the same sixteen-square folding. The square box fold gives the bed part proper, and that part of the bureau containing the drawers. From two squares, an eighth of an inch smaller, cut off line of four squares and fold as before; these give the smaller boxes or drawers.

Divide paper in half and paste one-half at back of bed and the other half at the back of bureau. The shirt-waist box reversed, and cover folded back, provides the settee. For the clock and screen fold two edges of the sixteen square fundamental form back to center and stand upright. Add face and pendulum to one, and some simple decoration to the other.

Sometimes these may be more satisfactorily folded from 6 x 8 oblong pieces of paper.

Another step in the work offering a pretty variety, lies in the making of these boxes and



baskets, from circles. Considering all that has been said, a few hints in the making of these will suffice. The size of the circle, the number, and depth of the cuts depend largely upon the purpose for which the boxes are intended.

**Circular Boxes  
and Baskets.**

A five-inch circle folded and cut in the following manner is a convenient size for collar buttons, studs, etc. Fold into halves, then into quarters, open to half, fold open edges at back to base line, crease, open, cut from open edges on center line to crease.

Repeat same on opposite diameter; fold pieces back as far as cuts will allow. The edges may be treated in any way desired. Lacing is generally preferred.

A nine-inch circle folded into eighths and cut to the half-indicated by folding center point to middle of curved edge, gives sufficient depth for a serving basket. If the sides of the pieces are cut straight, and holes punched, a cord may be run through long enough to allow the basket to open and lie flat.



## CONCLUSION

In the foregoing pages, the term Play has been used frequently, but always in a connection that implies some other use than the ordinary meaning of dramatic or "pretend-play." In closing the pages of this small book, the authors wish to add an explanatory word of the sense in which this play is to be understood.

Too often with young children, the idea of their play is given a meaning of such limited scope that the true nature of their delightful activity is misunderstood.

Play is, in reality, any activity of which the process is so much enjoyed, that though the end is realized, we do not hasten the process to reach the end. Also, there is one other requirement. There must be a feeling of choice, a certain self-impelled interest and opportunity in the activity. If these two conditions are fulfilled, others may go or come, be present or absent, but the activity will be play. When the process is not delightful in itself, but becomes somewhat arduous; when there is no sense of self-impulsion; when it is per-

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## CONCLUSION

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sisted in, not for itself, but for the end it seeks, it is work. And work is a good thing, but for the young child, to whom the world is "so new-and-all," whose purposes are so closely related to his activities, whose sense of values is almost entirely in activities and not in results, it will be very difficult to awaken an interest in work. And work done by means of device or purposes dressed up, to entice the child to work towards them, are just as detrimental to the true spirit of work as the equally foolish method of endeavoring to make a process the only interest to the child, and thus force the spirit of play, when he could appreciate the end in view, and the satisfaction of persisting in endeavor to reach it.

Froebel did not advocate a method of play in education. What he advocated was education through self-activity. Through the type of activity, which is natural to the individual in any stage in his growth. His reason for advocating play in the kindergarten was because during the first years of life, this is the spontaneous and instinctive type of activity, natural to the young child. He did not

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## CONCLUSION

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advocate this for all education, but in nothing has he been more misunderstood than in this.

He says, "The activities of the senses and limbs of the infant, is the first germ, the first bodily activity, the bud, the first formative impulse. Play, building, modeling, are the first tender blossoms of youth, and this is the period when man is to be prepared for future industry, diligence and productive activity. "Education of Man," section 23, p. 11.

Having discovered the natural incentive to self-active endeavor for the small child, he hoped to follow this by the discovery of the slowly developing incentives, suitable to the stages of growth following. Play was to him a method for little children, expressive of a principle of education, and as such it should be used.

This has been the point of view in this book. These are *gateways* to Art and Industry, natural avenues which if hopefully and joyously followed will lead to earnest achievement in these more serious undertakings.

One more word should be added to this. Boynton says, in his review on children's books, that the true test of a child's book is

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## CONCLUSION

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whether the adult can also enjoy it; and the best children's books stand this test. What grown person fails to enjoy equally with the child, a beautiful folk-tale, or such a classic as *Mopsa the Fairy*, or *Alice in Wonderland*.

Froebel says in his "Pedagogics," page 17, "The child's employments as well as the means and objects of such employments (the plays and playthings), are too little, indeed not at all, recognized in their deep, true significance; are too little comprehended in their general human interest and spirit. The consequence of this is that these means of play offer too little, indeed, nothing at all, to the adult for the nourishment and continued development of his or her own life. Hence, aside from the duty of older people to children, it seems to the adult a waste of time to employ himself or herself with fostering the child's impulse to activity, by means of and in its plays."

This same test then, can and should be applied to work planned for young children. It must have childlike, simple, playful interests and characteristics, but must also exist in obedience to those eternal principles of beauty,

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## CONCLUSION

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truth, and use, which are always old, yet always young. Only thus will they provide real food for the mysterious and embryonic spirit of childhood, those seed possibilities that are as truly there in the germ, as they are in the acorn or the seed kernel.

And only thus will they win from us, slow-moving and matter-of-fact grown-ups, the sympathy and understanding, the serious consideration, which can give their true fruition to these "weak puttings-forth of the child soul," yet so filled with "prophetic worth."





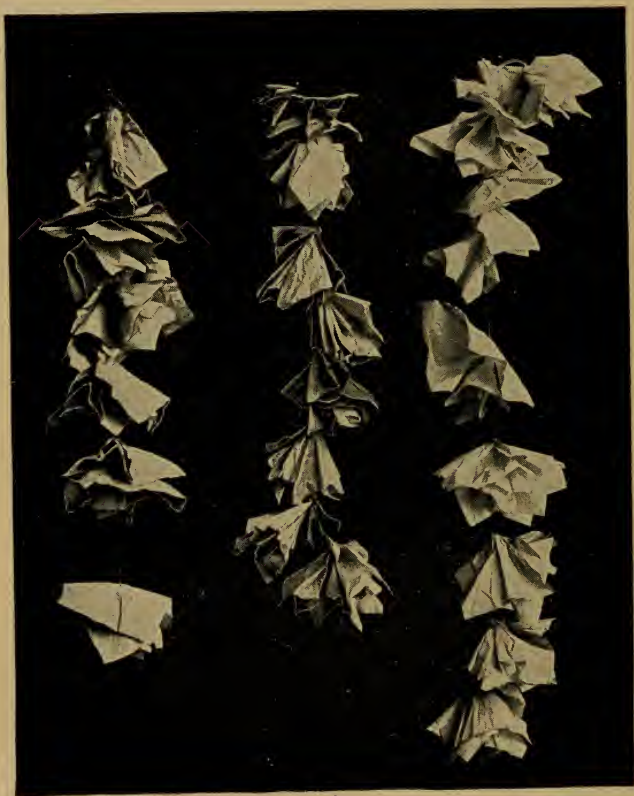
## PLATES



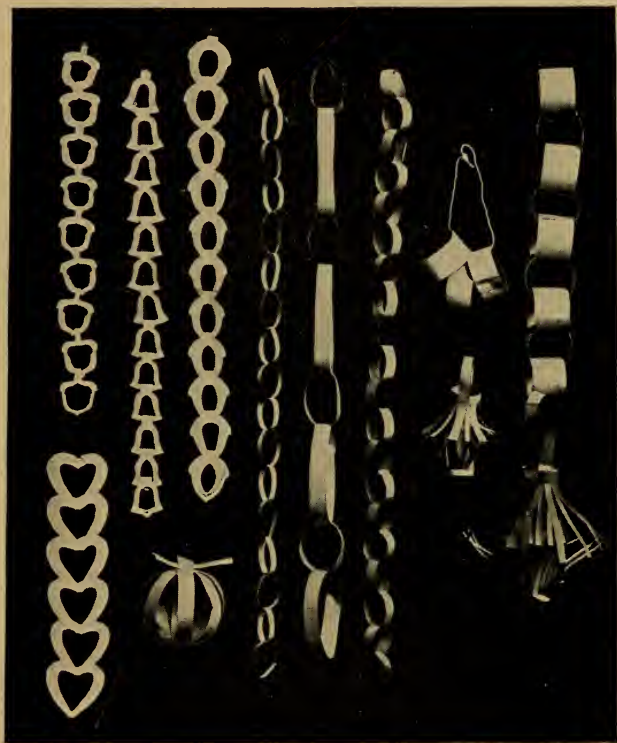


STRINGING OF PARQUETRY CIRCLES AND SQUARES.

Or flower forms with straws.

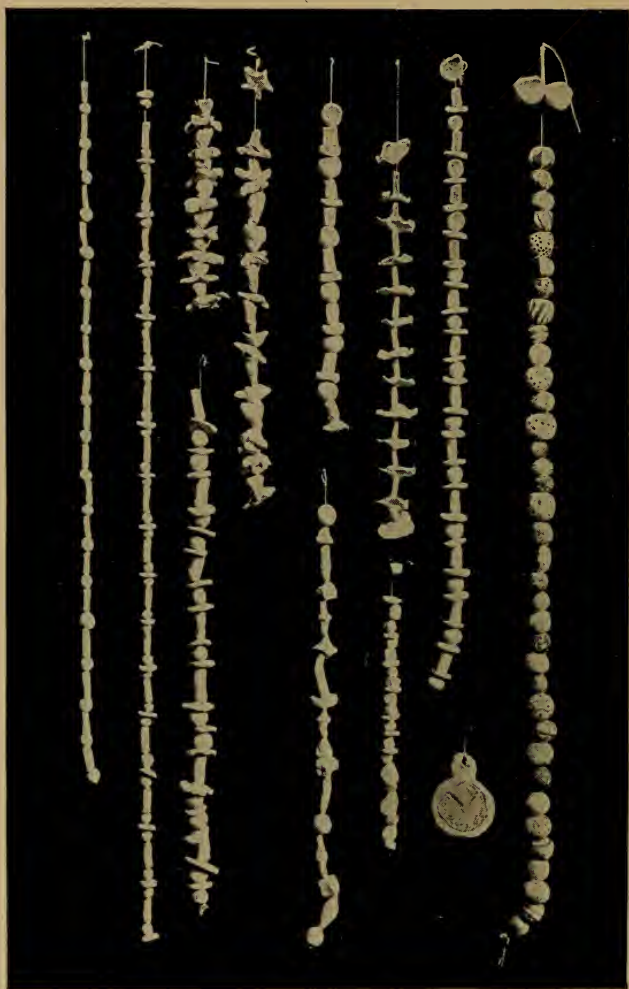


TISSUE PAPER STRINGING.

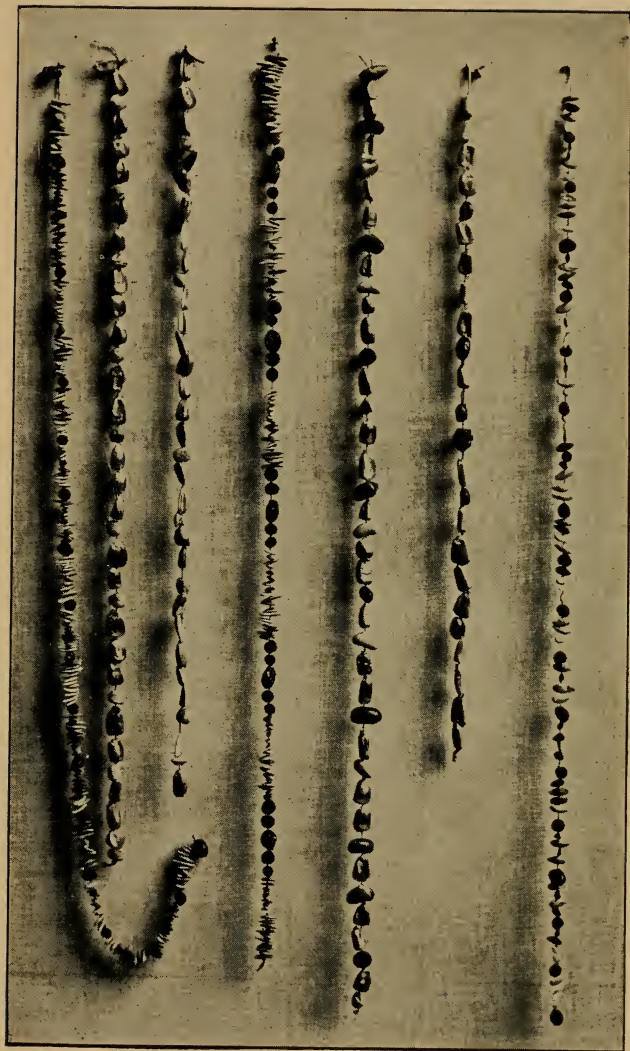


DEVELOPMENT OF PAPER LINK CHAINS.

Order moves from right to left.

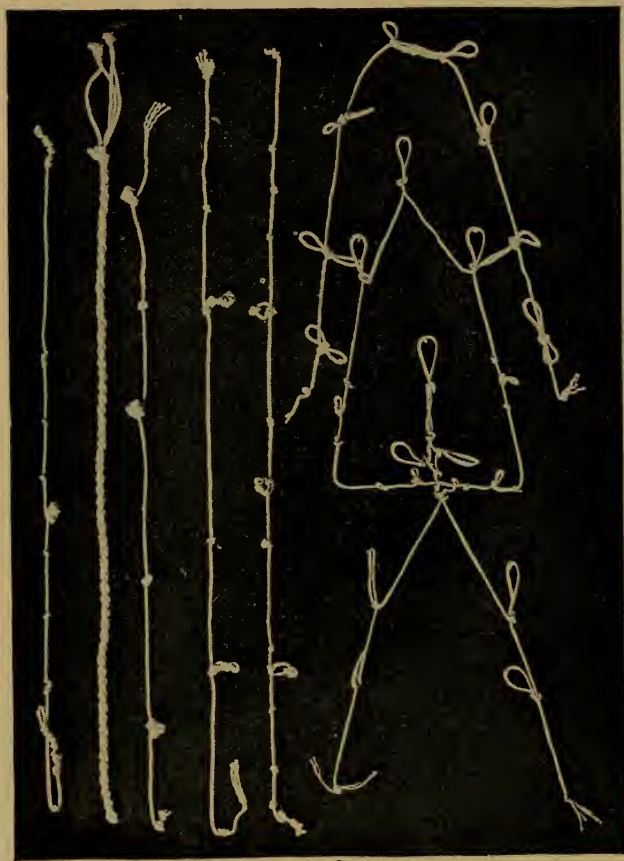


CLAY STRINGING OF VARIOUS FORMS.



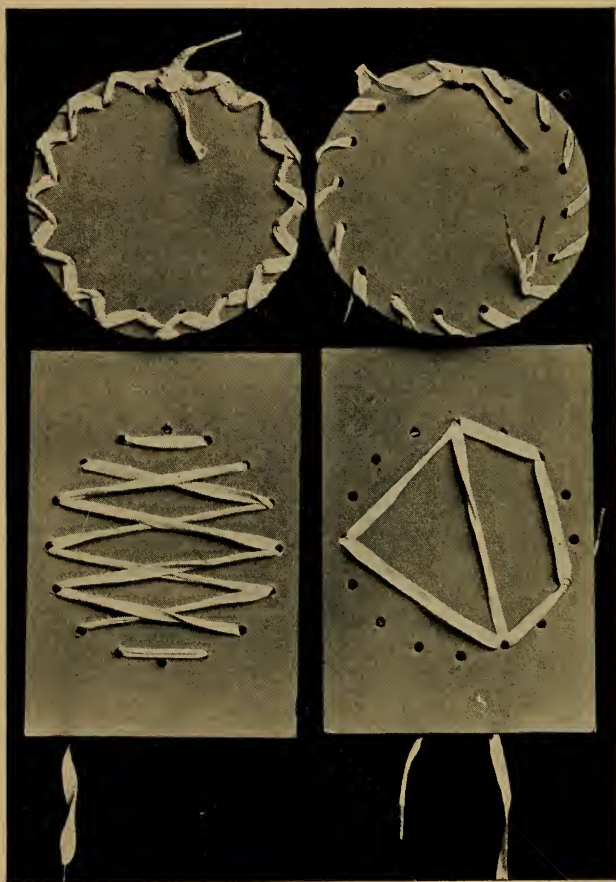
SEED STRINGING.



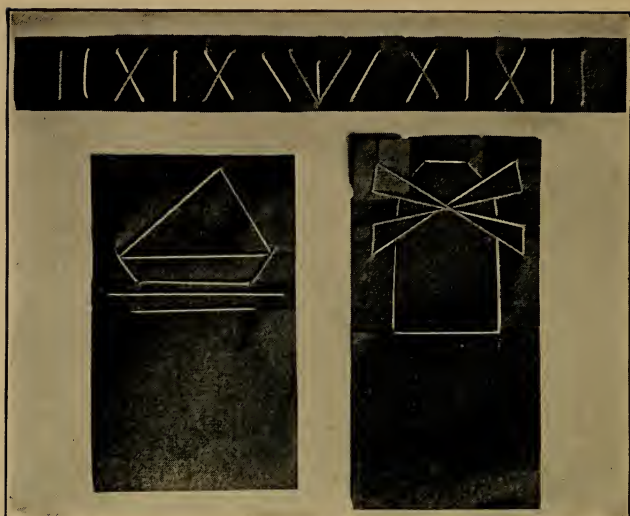


KNOTTING.

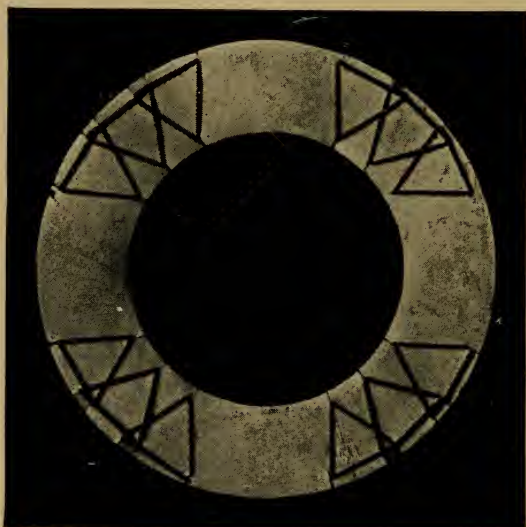




FREE SEWING WITH SHOE LACINGS.

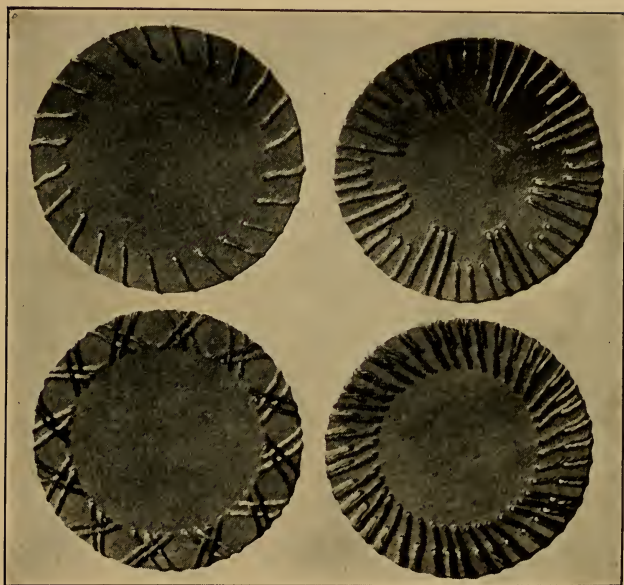


FREE SEWING.



FREE SEWING FRAME.

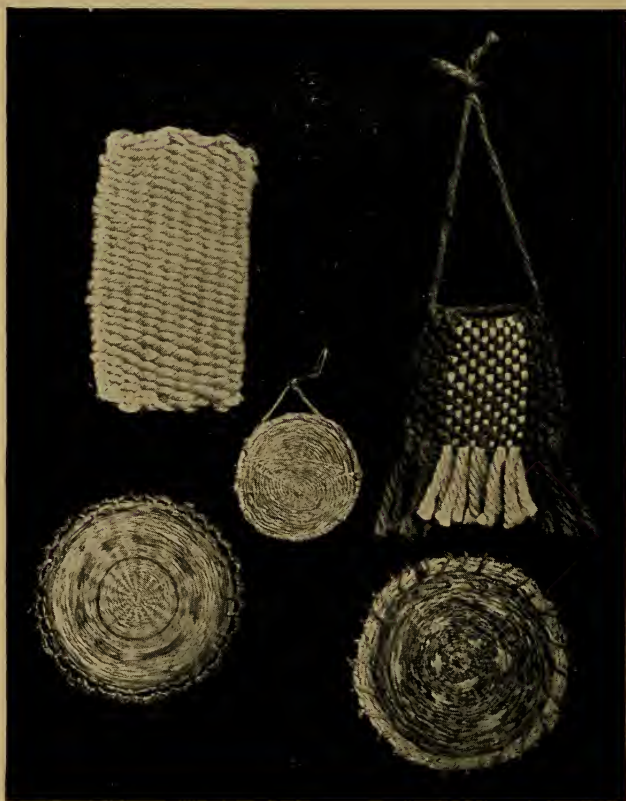
PART I, SECTION IV, page 37



OVER-EDGE SEWING.

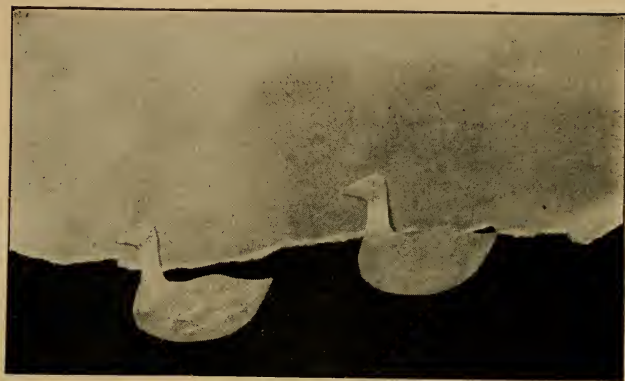


PAPER LOOM STRIPS WOVEN IN.



ADVANCED WEAVING IN A VARIETY OF MATERIALS.

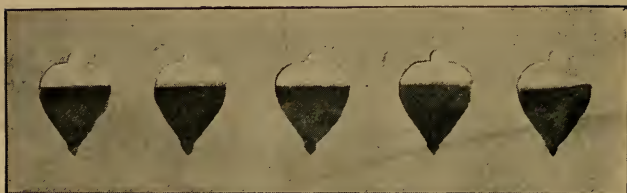
PART I, SECTION VI, pages 51-52



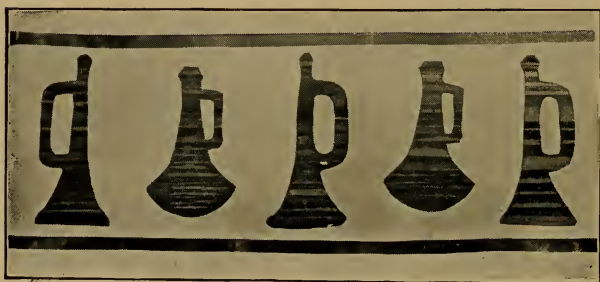
POSTERS.



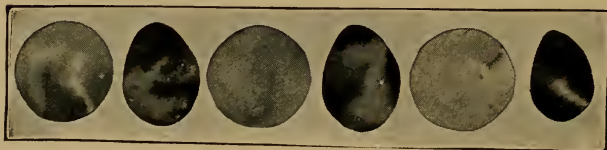
PART II, SECTION II, pages 65-66



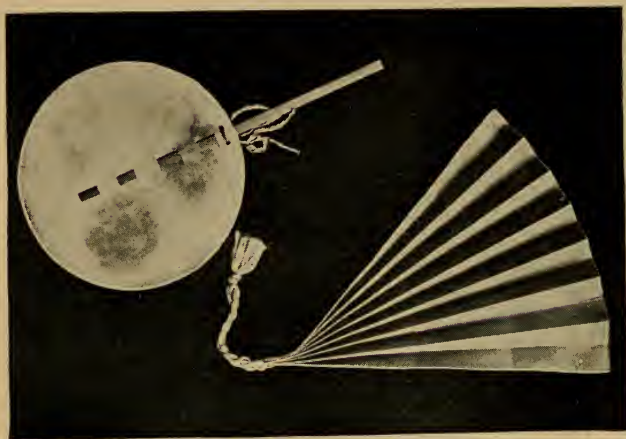
WASH IN TWO COLORS.



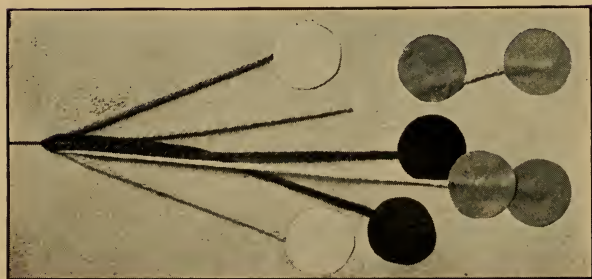
STRIPE PAINTING.



DROP PAINTING.



DROP PAINTING AND STRIPE PAINTING FANS.



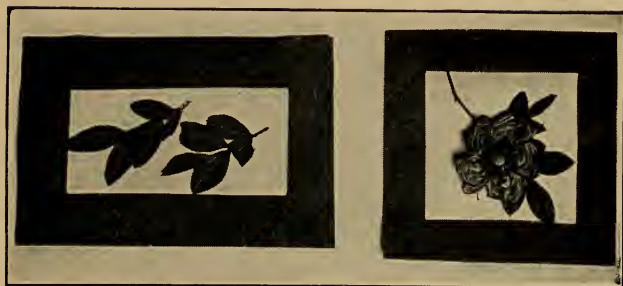
COLOR EXPERIENCE—PARQUETRY  
CIRCLES PASTED AS BALLOONS.



TOY PLATES—CRAYONED UNITS.



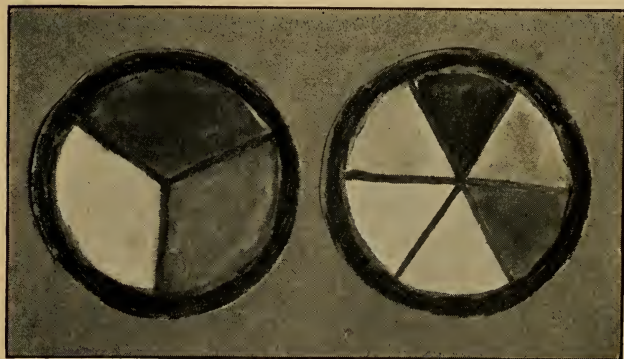
PART II, SECTION IV, page 75



PRESSED FLOWERS FRAMED.  
Tissue Paper Transparencies.

1

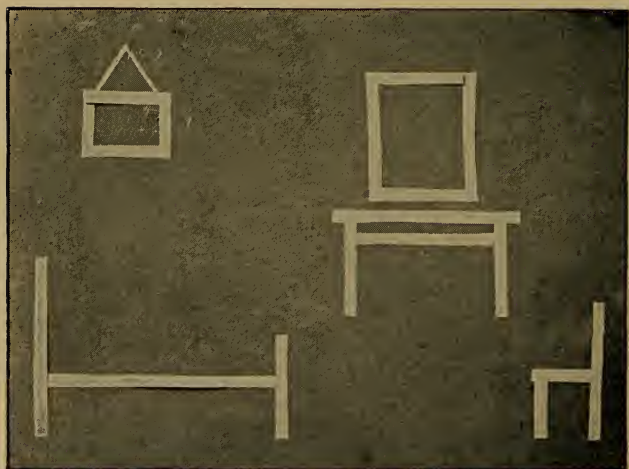
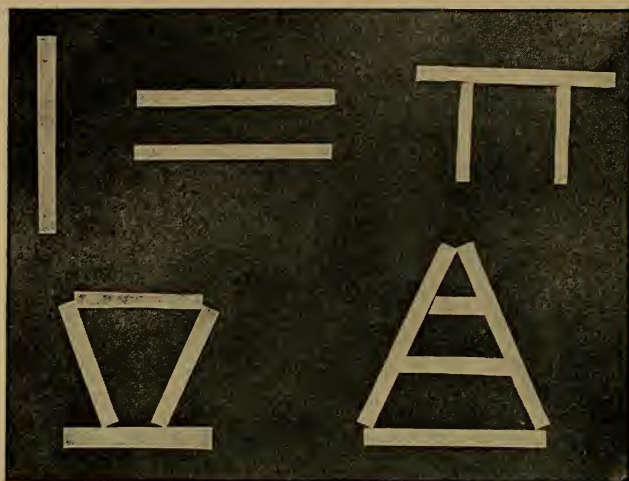
2



PAINTED TRANSPARENCIES.

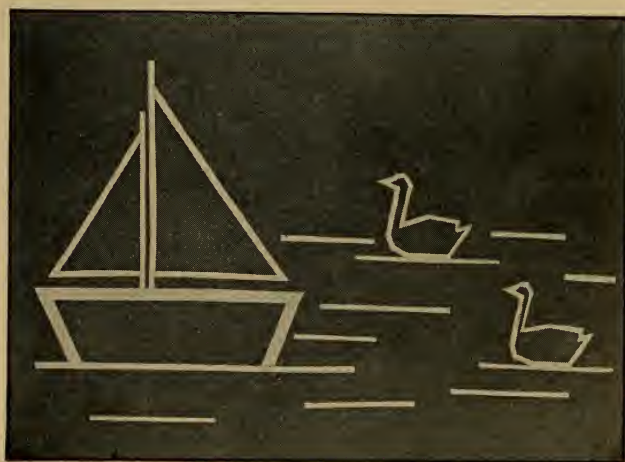
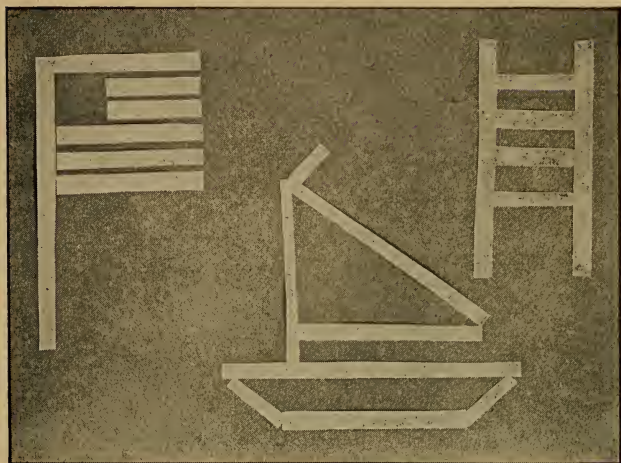
1. The three fundamental colors.
2. Six prismatic colors.

PART III, SECTION I, pages 82-86



STRIP PASTING.  
136

PART III, SECTION I, pages 82-86



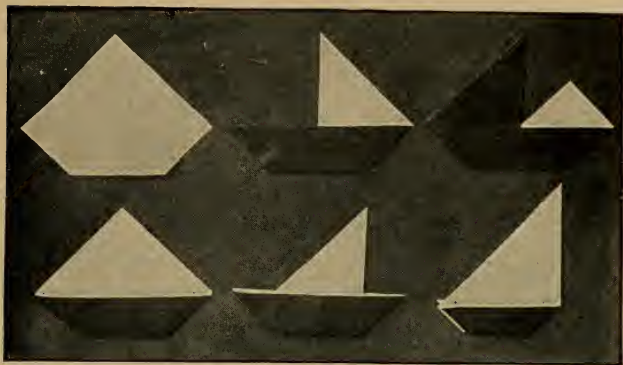
STRIP PASTING.

PART III, SECTION II, page 89

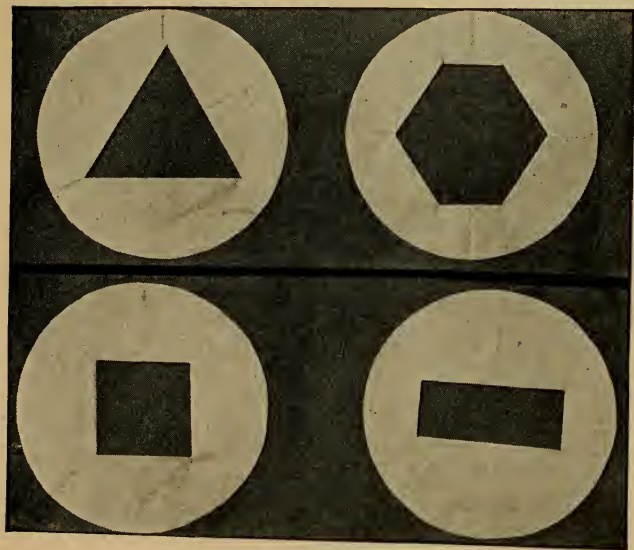


UNITS—FREE TEARING, NO. 1.  
UNITS—PRESENTED, NOS. 2. AND 3.

PART III, SECTION IV, pages 95-98



SEQUENCE OF BOATS.



FOLDED FRAMES.



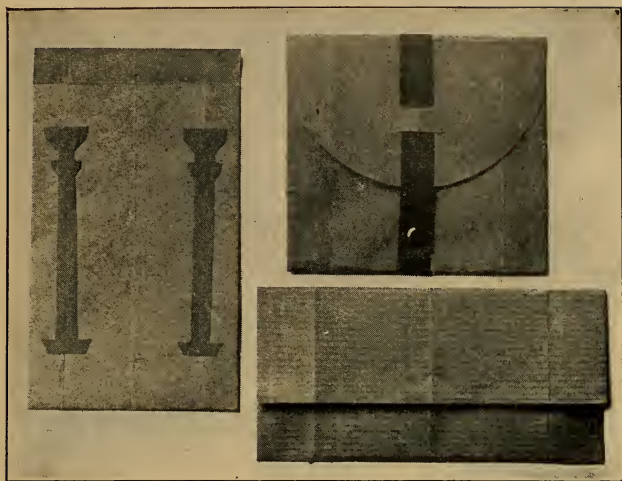
PART III, SECTION IV, page 97



FURNITURE CONSTRUCTION.

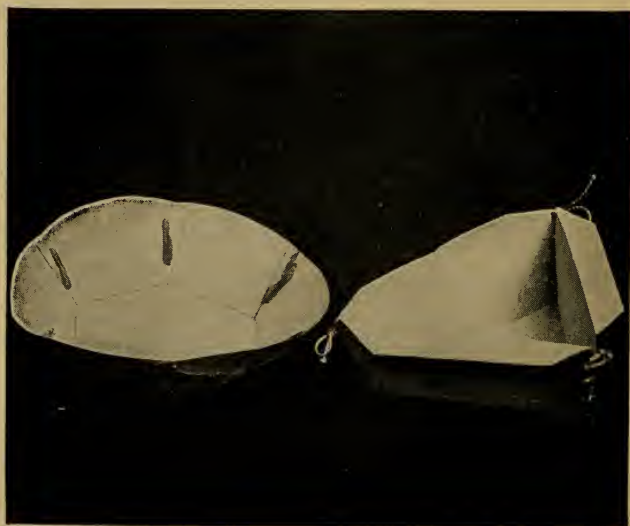
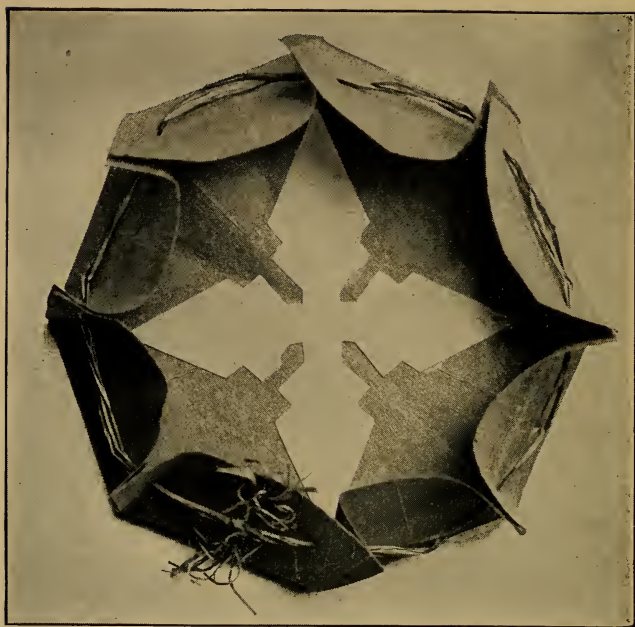
1

2



1. POSTAL CARD ENVELOPE.
2. POSTMAN'S BAG.
3. LETTER CASE.













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